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French Presidency of the Council of the European Union



➤ Health system resilience post-COVID: Moving towards more European cooperation

- Strengthening health system resilience in the COVID-19 era
- Enhancing participatory governance
- Transforming delivery of essential health services
- Creating surge capacity and rethinking skill mix
- Supporting and protecting health workers
- COVID-19 and the use of digital health tools
- Addressing backlogs and managing waiting lists
- Intensive care capacities during the pandemic
- EU support for health systems
- Crossing the border for health care
- New Instruments towards a European Health Union

:: Special Issue ::

Volume 28 | Number 1 | 2022

EUROHEALTH

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Design and Production: Steve Still

ISSN 1356–1030

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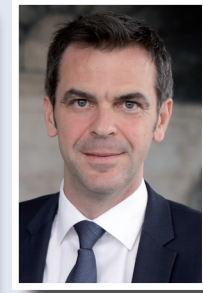
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FOREWORD

For almost two years, the European Union and the world have been experiencing the worst public health crisis in modern times.



This unprecedented COVID-19 pandemic has caused immense human suffering and loss of life, and triggered a shock to the economy and labour markets around the world, with huge socio-economic impacts. It has particularly exposed our health systems, which have had to adapt to a situation never before experienced. While at first the Member States responded to the crisis in isolation, the evolution and cross-border impact of the health situation showed that the action and coordination of the European Union (EU) and the solidarity that has come with it, has proved essential to address a health threat of this magnitude.

Faced with successive waves of the pandemic, EU Member States gradually coordinated more and more closely with each other in order to develop common solutions and to respond to the new organisational and financial challenges faced by their health care structures. This report provides an opportunity to look back at several of the significant initiatives taken, to highlight them and to draw inspiration from some of them in order to continue building the future.

France, which will hold the Presidency of the European Union in the first half of 2022, and the European Commission are sending out a strong message calling for better and stronger cooperation in the area of health within the European Union, in order to strengthen the resilience of each of our health systems and to guarantee citizens access to quality, equitable and affordable care. Faced with a global health threat, the EU is only as strong as its weakest link. The health situation in one Member State is contingent of the health situation in another. COVID-19 has showed this very clearly.

The current challenging situation has led us to analyse the impact of this crisis and to recognise that it was the solidarity, cooperation and coordination

at cross-border and European levels that has been the determining factor in the effectiveness of the responses provided.

To this end, the European Union has taken unprecedented steps to support the Member States to strengthen the resilience of their health systems, in particular through the new EU4Health programme, the largest EU funding programme for health ever with a budget of €5.3 billion and part of the EU's response to COVID-19. The four general objectives of this programme include improving health in the EU, combating cross-border health threats, preventing, preparing for, and responding to cross-border health threats, developing suitable therapeutic solutions, medical devices and strengthening health systems.

The EU needs to work together to build a strong European Health Union. The strengthening of the mandates of the European Centre for Disease Prevention and Control and the European Medicines Agency, as well as the creation of the new European Health Emergency Response and Preparedness Authority (HERA) are part of the essential pillars of the Health Union we have embarked on building.

Beyond these initiatives and on the basis of our common values, it is up to us to be a force which proposes and promotes new instruments of cooperation together, for a European Health Union at the service of its citizens. This not just about COVID-19 – but about investing in our common future.

Stella Kyriakides

Commissioner for Health and Food Safety, European Commission

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EDITORIAL

The COVID-19 pandemic has unleashed unprecedented disruption to our lives and health systems. In this context, countries across Europe have responded with ingenuity and resourcefulness to these challenges.

Importantly, we have seen that by working together, across Europe and globally, we can learn from and support each other through this crisis and beyond to help build more resilient health systems. In this special issue of *Eurohealth*, published to coincide with the start of the French Presidency of the Council of the European Union in January 2022, we explore these themes – resilience, solidarity and European cooperation – and how they have shaped and enhanced pandemic responses.

In the first article of the issue, Sagan and colleagues look at how resilience is defined for health systems and the strategies European countries have taken to meet the challenges posed by the pandemic. Looking ahead to potential future health shocks, the authors draw lessons to help improve preparedness and strengthen health system resilience more generally. Rajan et al., next explore the critical issue of health democracy and the importance of having citizens and health workers involved in decision-making, especially in times of crisis.

Several transformations have occurred in the delivery of health. Webb and co-authors analyse how health systems have adjusted their coverage, care pathways and primary care provision to ensure the continuation of care. The transformation of health services could only occur through changes to the workforce. Williams et al. look first at how countries have surged and re-purposed the health workforce, followed by illustrating the range of measures taken to protect and support health workers.

The increase in digital health tools has been an obvious transformation which has necessitated changes to regulation, reimbursement, investment and training. These processes are explored in the article by Williams and colleagues. Care backlogs and waiting lists are now a growing concern in all Member States; van Ginneken et al. offer strategies on how to tackle these to help patients receive the care they need.



During peaks of the pandemic, patients who required critical care were mostly looked after in their own country, but Winklemann et al., show that cooperation across countries provided support when it was needed. The European Union has played a significant role in providing a variety of support tools for countries, facilitating the movement of patients across borders (see article by Wismar and colleagues). Mauer et al., further highlight that the European Commission has devised new instruments to expand the scope of existing tools for the pandemic response and beyond.

This special issue of *Eurohealth* is published at a time when COVID-19 variants and vaccine hesitancy present continued challenges. This underscores the importance of examining and learning which actions can contribute to strengthening ongoing health system responses. Acting on this evidence can ensure COVID-19 is a catalyst for transformative change in health systems to ensure they are better equipped to meet future health crises and to provide more accessible and higher quality care to European citizens.

The special issue has been prepared by the European Observatory on Health Systems and Policies and the General Directorate for Health Care Services of the French Ministry of Solidarity and Health in support of the conference on “*The resilience of the Union’s health systems to promote cooperation on a European scale*” on 18 January 2022.

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Cite this as: *Eurohealth* 2022; 28(1).

STRENGTHENING HEALTH SYSTEM RESILIENCE IN THE COVID-19 ERA

By: Anna Sagan, Scott L. Greer, Erin Webb, Martin McKee, Natasha Azzopardi Muscat, Suszy Lessof, Isabel de la Mata and Josep Figueras

Summary: This article sets the scene for other articles in this issue by defining health systems resilience and its key components. It then summarises the key strategies that influenced the resilience of European health systems during the COVID-19 pandemic and asks how emerging lessons can help improve resilience to future shocks and strengthen health systems more generally. While it would be easy to be pessimistic given experiences in the pandemic, we can draw some encouragement from the learning that has taken place; the tools available; and perhaps above all, from the willingness at national and European levels to collaborate on building back better.

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Keywords: Resilience, Preparedness, Governance, Health Systems Performance, COVID-19

Introduction

Health system resilience is the ability to prepare, manage (absorb, adapt and transform) and learn from shocks. These shocks are often sudden and extreme natural, financial and ‘other’ acute disturbances, such as the COVID-19 pandemic*. This can be seen as a cycle consisting of four stages, although these are almost never clear-cut and usually overlap (see Figure 1).

The first stage, **preparedness**, relates to the health system’s vulnerability to shocks. The preparedness stage provides the greatest scope and time for action on health systems strengthening, resource consolidation and response preparation.

Ideally, the preparedness stage includes horizon scanning to identify and anticipate different types of shocks to develop appropriate actions.

The focus of the second stage, **shock onset and alert**, covers timely identification of the shock. An effective response in the second stage of the shock cycle requires robust and comprehensive surveillance and early warning systems, because it is only possible to begin responding to a shock once it is recognised.

During **shock impact and management**, the third stage of the shock cycle, the system absorbs the shock and, where necessary, adapts and transforms so that the health system goals can still be achieved. One example of absorbing a shock can be found in using spare

* Some definitions also extend this to meeting underlying, long-term, structural challenges, although reacting to such stressors will inevitably differ compared to more acute shocks.

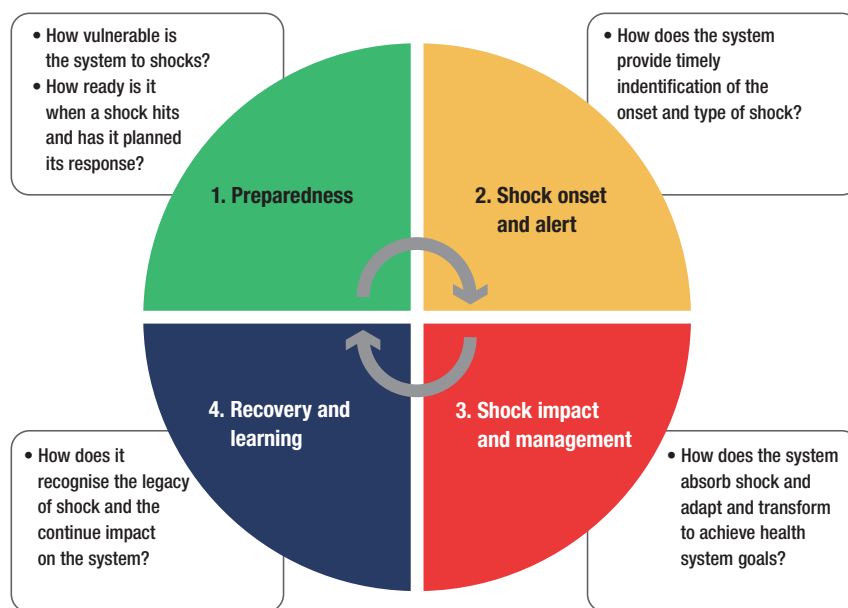
capacity, which can protect the health system. Adapting to a health system shock can further confer resilience by seeking efficiencies ('doing more with less' or changing the allocation of resources), which may require changing delivery within the system. When absorbing or adapting to the shock is no longer possible, the system may need to more fundamentally transform to cope with the impact of the shock, for example through a more radical rethinking of health policy and the resourcing and delivery of care.

“building resilience into health systems and governments is crucial”

Finally, the fourth stage, **recovery and learning**, moves towards some return to normalcy but there may still be changes as a legacy of the shock. In this stage, it is important to recognise what has changed and how that will continue to impact the health system and its performance. For instance, staff may be burned out or have reduced capacity if health workers have left the profession. There may also have been some beneficial changes, for example efficiencies made in adapting to the shock, which could be encouraged even after the shock. The shock experience and its management also provide valuable information not only for improving the current system but also in relation to better handling of another shock in the future.

Indeed, the COVID-19 pandemic has demonstrated that health system resilience is much more than technical preparedness to shocks. Countries may have more (or less) resources in place to respond to a crisis – more (or less) staff, laboratory capacity or intensive care beds – but these do not guarantee the ability to mobilise effectively when shocks hit. Nor do they touch on how well a system's organisation and management will cope under stress

Figure 1: The four stages of the shock cycle are dynamic: Recovery and learning from one shock feeds into preparedness for the next



Source: ¹

or the extent of learning in the aftermath of the shock – all these are important components of resilience.

Making the link between recovery and learning from a shock to preparedness for the next one is especially important. There is however a very real risk that once the shock is felt to be over decision-makers will turn their attention to day-to-day problems and miss the opportunity both to address preparedness and to resolve underlying resilience concerns. As we embark on year three of COVID-19, there are lessons countries can draw from the pandemic responses to strengthen their ability to respond in the future.

What were the key strategies that influenced resilience during the COVID-19 pandemic?

In its study “Health systems resilience during COVID-19: Lessons for building back better”, the European Observatory on Health Systems and Policies reviewed the extensive body of evidence from Europe and beyond to understand how health systems succeeded or failed in maintaining performance during the current pandemic.² These measures are summarised into 20 strategies.

These group into categories: leading and governing the COVID-19 response; financing health and other services; mobilising and supporting the health workforce; strengthening public health interventions; and transforming the delivery of health services to address COVID-19 and other needs (see Table 1); which broadly correspond to the core health system functions. The strategies like health system functions themselves are all closely interlinked and depend on one another.³

The ultimate goal of these strategies is to ensure dual delivery of preventive and curative services so that people's health – those suffering from COVID-19 and those with other health needs – can be maintained.

COVID-19 posed two major challenges to service delivery: it created surges in demand from patients with COVID-19 and made it extremely difficult to maintain services for non-COVID populations. Health systems employed two broad strategies: scaling up, which involved repurposing and redistributing capacity, and adapting or transforming service delivery by implementing alternative patient care pathways. The article by

Table 1: Twenty key strategies to enhance resilience during COVID-19

LEADING AND GOVERNING THE COVID-19 RESPONSE	
Strategy 1	Steering the response through effective political leadership
Strategy 2	Delivering a clear and timely COVID-19 response strategy
Strategy 3	Strengthening monitoring, surveillance and early warning systems
Strategy 4	Transferring the best available evidence from research to policy
Strategy 5	Coordinating effectively within (horizontally) and across (vertically) levels of government
Strategy 6	Ensuring transparency, legitimacy and accountability
Strategy 7	Communicating clearly and transparently with the population and stakeholders
Strategy 8	Involving nongovernmental stakeholders including the health workforce, civil society and communities
Strategy 9	Coordinating the COVID-19 response beyond national borders
FINANCING COVID-19 SERVICES	
Strategy 10	Ensuring sufficient and stable funds to meet needs
Strategy 11	Adapting purchasing, procurement and payment systems to meet changing needs and balance economic incentives
Strategy 12	Supporting universal health coverage and reducing barriers to services
MOBILISING AND SUPPORTING THE HEALTH WORKFORCE	
Strategy 13	Ensuring an adequate health workforce by scaling-up existing capacity and recruiting additional health workers
Strategy 14	Implementing flexible and effective approaches to using the workforce
Strategy 15	Ensuring physical, mental health and financial support for health workers
STRENGTHENING PUBLIC HEALTH INTERVENTIONS	
Strategy 16	Implementing appropriate nonpharmaceutical interventions and Find, Test, Trace, Isolate and Support (FTTIS) services to control or mitigate transmission
Strategy 17	Implementing effective COVID-19 vaccination programmes
Strategy 18	Maintaining routine public health services
TRANSFORMING THE DELIVERY OF HEALTH AND SOCIAL CARE SERVICES TO ADDRESS COVID-19 NEEDS	
Strategy 19	Scaling-up, repurposing and (re)distributing existing capacity to cope with sudden surges in COVID-19 demand
Strategy 20	Adapting or transforming service delivery by implementing alternative and flexible patient care pathways and interventions and recognising the key role of primary health care

Source: ²

Webb et al. in this issue explores the flexible ways countries went about transforming essential health services. Often, the successes and failures of health systems related to context and differences in capacity at the start of the pandemic. Yet, excess capacity in hospitals is not a panacea and that, on occasion, it skewed the care delivered so that patients who could have been effectively treated in primary health care or outpatient settings were hospitalised inappropriately.

Public health measures were critical in reducing COVID-19 transmission and

protecting delivery of curative services and included non-pharmaceutical interventions (physical distancing; Find, Test, Trace, Isolate and Support (FTTIS) services) as well as vaccination campaigns, when they became possible. At the same time, routine services had to be maintained from childhood vaccination to cancer screening services. Many regular public health services were interrupted or failed and there were serious challenges in rolling out FTTIS systems. Public health leaders were not often central to decision making and alternative models to traditional public health tracing services

(based on call centres and phone apps) were often preferred despite proving to be more expensive and less effective. Many countries could benefit from studying approaches implemented in countries that were more successful in delivering public health services.

Changes to service delivery would not be possible without mobilising and supporting the workforce. This revolved around increasing numbers of staff; reskilling and sharing tasks and roles differently; and trying to protect the health workforce from the worst (physical, psychological

and financial) pressures. The article by Williams et al. on surge capacity and skill-mix highlight efforts to mobilise and use the health workforce flexibly but also demonstrate the pre-existing shortcomings in terms of shortages, the maldistribution of staff and skills, and the limited data on health workforce.

Maintaining curative and public health services and sustaining the human resources that delivered them was all underpinned by the financing strategies deployed. Countries had to find money to increase health expenditure to meet the demand for COVID-19-related services while, at the same time, facing reduced income. Providers lost revenue as volumes paid for services fell and governments faced decreased taxes and insurance contributions as the economy contracted. Strategies to secure sufficient funds for the health sector included drawing on financial reserves, budgetary reallocations and borrowing. There were also efforts to make payment of providers adapt to the new environment, so for example making it possible to reimburse consultations that moved online (see the article in this issue by Williams et al. on digital health). Emergency procurement (of protective and testing equipment) was also allowed despite the risks posed. Some countries also reduced or removed user charges, which are known to act as a deterrent to uptake of essential services. These strategies demonstrate the need for systems to build in flexibility but also how critical it will be to go back and check on the changes made ‘in extremis’ once the situation stabilises.

Governance is critical in the ability to legislate for and regulate changes: in working practices; in surge capacity; and in payment systems. It is essential in ensuring the effective operation of all other health system functions and in making them work in concert with each other. It is central in coordinating national policies and local responses, administrative levels and sectors; and linking initiatives across sectors (welfare, social support, and education). It also extends to coordinating with other countries and international actors. Countries with strong health system governance were better placed to promote

transparency and accountability and support the effective political leadership of the broader response and better able to play their part in European responses.

Strengthening health system resilience at the European and global levels

The strategies above and their key elements, as described further in the articles here and the Observatory study,² can be used as the first step in national assessments of how health systems coped and what they might do to be ready for future health shocks. Each resilience strategy can be linked to a number of qualitative and quantitative indicators that allow policymakers to identify strengths and weaknesses in their system and their particular setting. These can point the way towards action that can be taken now to resist future shocks.

Assessing financial, physical and workforce strengths is made easier because they include much which is objectively measurable (the number and distribution of beds, doctors and nurses and so on) but there still needs to be a strong contextual or qualitative component to any evaluation. Simply counting intensive care beds cannot show the constraints in staffing them or demonstrate that the intensive care unit capacity that exists is optimal. Elements such as the distribution of skills or the degree of flexibility in the use of health workers or the appropriateness of service delivery are even more difficult to appraise because they involve interpretative judgements. The availability and distribution of resources has then to be assessed in tandem with a review of the capacity to mobilise those resources to meet service delivery needs, and of the ability to flexibly adapt or transform services as needs change during future (unknown) shocks.

Concerning governance, the pandemic has highlighted a need to take on board lessons regarding centralisation, decentralisation and coordination and for a review of its relationship with civil society and the media. It has also become clear that governance must address resilience explicitly and that it has a greater part

to play in fostering the creativity, inclusiveness and foresight required for an anticipatory health governance³ that will be capable of generating alternative scenarios to cope in future emergencies (see the article by Rajan et al. in this issue). Again this is not easy for policy makers to capture, not least because governance is complex and not well understood.⁴ Governance also continues to evolve, with new actors and approaches emerging over time, some of which were intensified, reshuffled or reversed during the pandemic.

“taking
action now
to prevent a
catastrophe on
the scale of
COVID-19 from
happening again

While the 20 strategies provide a structure for thinking about resilience, there is no ‘one size fits all’ approach to achieving it. Health system responses are influenced by the specific national health systems’ characteristics, including the levels of resources and organisational capacity and their prior experiences with communicable disease outbreaks. Nor can they be separated from pandemic responses in other sectors, such as welfare, social care, and education, or indeed from external factors – the geographic, demographic, socio-economic, political, and cultural contexts. Individual countries must be guided by their own national contexts and the point in time that any actions are taken but there is broader learning from international approaches that is of value.

Several countries have already embarked on assessment of their pre-preparedness and responses to COVID-19. Finland, for example, has acknowledged that its plans focused on much smaller scale and short-lived crises and were not suited for meeting challenges of all-encompassing,

prolonged shocks such as COVID-19. This echoes the wider European experience where health systems, and especially hospitals, were often left to compensate for failures in other areas, such as infection control or social policy, and frequently ended up overwhelmed. Clearly review is a first step towards developing better emergency response plans and better coordination.

Calls to improve resilience to health threats have also been made at international and global levels. The European Union (EU) has launched the European Health Union, proposing a new Regulation on Serious Cross-Border Health Threats; upgrading the 1082/2013 Decision on Serious Cross-Border Threats to Health; and expanding the mandate of two key EU agencies to assist the EU with implementation: the ECDC and the European Medicines Agency (EMA). Further, a new Health Emergency Preparedness and Response Authority (HERA) – modelled on the Advanced Research and Development Authority (BARDA) in the USA – has been established to oversee preparedness for future health emergencies (see the articles by Mauer et al. in this issue).

Going beyond the EU, the Pan-European Commission on Health and Sustainable Development (known as the Monti Commission) has made a set of recommendations which aim to prevent a catastrophe on the scale of COVID-19 from happening again. Tellingly, two of its objectives centre on improving health governance at both the global and pan-European level.² The current European Programme for Work 2020–2025, the strategy and work plan of the WHO European Regional Office³ under its Regional Director, Dr Hans Kluge, prioritises strengthening health leadership in national contexts. This goes beyond calling for better leadership at an abstract level and recognises the need to train and provide direct technical support to countries to build up their capacity. To what extent the ambitious calls made by Mario Monti and colleagues will be met remains to be seen although the initial responses from the WHO EURO Regional Committee and the G20 are encouraging.

Conclusion

The concept of health systems resilience has evolved over time from how to best manage the immediate response to the COVID-19 pandemic to what constitutes a resilient response in the longer term to survive the inevitable future challenges facing both health systems and society. In line with the notion of ‘building back better’, this longer-term perspective underpins many national and international recovery plans and instruments. It has also been investigated through the international initiatives described in this article. These efforts take a holistic approach, going beyond strengthening health systems and incorporating other systems and ongoing major trends such as digitalisation, which has been accelerated by the pandemic, demonstrating the need to take an interconnected systems approach.

There is always a risk that, after a crisis, public and political attention will move on, forgetting important lessons and neglecting the reforms needed. The key lesson of COVID-19 is that building resilience into health systems and governments is crucial if they are to survive the inevitable challenges that will arise, from future pandemic threats to climate change. It will not be easy to make the case for investing in many aspects of a resilient health system, especially investments related to governance. There is a natural tendency to focus on recent disasters rather than events that have not yet occurred⁴ or have not had a national impact. Health systems resilience to major shocks, such as COVID-19, depends on coordinated international and global actions, which as the ongoing pandemic shows, are not easy to achieve. Nevertheless, the COVID-19 pandemic presents an opportunity to be a catalyst for action and provide momentum to act and improve health systems resilience in the EU and beyond.

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BEYOND CONSULTATIONS AND SURVEYS: **ENHANCING PARTICIPATORY GOVERNANCE IN HEALTH SYSTEMS**

By: Dheepa Rajan, Eva Brocard, Charlotte Poulussen, Kira Koch, Naomi Limaro Nathan, Katja Rohrer-Herold and Pascal Melihan-Chenin

Summary: Participatory governance means engaging with the population with the aim of making policies more responsive and implementable. The COVID-19 pandemic has, however, highlighted that much-needed reforms towards true participatory governance of the health system has not been adequately prioritised and resourced. In this article, we explore what is meant by participatory health governance and the key actors involved, before considering two examples of participatory spaces in France and Portugal. We suggest that not one but a variety of participatory spaces should be made available to ensure a broad range of voices get heard, including population groups whose views and experiences are often left behind.

Keywords: Health Democracy, Participatory Governance, Policy-making Processes, Public Engagement, Community Participation

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Introduction

Health decision-makers have consistently acknowledged the need to take into account people's needs and views to ensure responsive policies. Indeed, the principle of participation has been affirmed time and again in various health-related international declarations¹ and resolutions,² as well as within national constitutions and legal frameworks. Yet in practice, neither the current discourse on pandemic preparedness nor the global attention paid to universal health coverage have adequately prioritised and resourced

the much-needed reforms towards true participatory governance of the health system.

Part of the challenge is clarifying what participatory governance actually means in practice. What kind of participatory spaces are needed for governments to engage effectively with people? Who are 'people'? What about engagement with crucial health stakeholders who can make or break health reform, such as health professionals and pharmaceutical manufacturers? How can government-people engagement be meaningful yet policy-relevant?

In this article, we aim to address these questions by providing an overview of what ‘people’ means in the context of participatory policy making. We then chronicle two examples of participatory spaces in Europe, before suggesting the use of not one single but a variety of such spaces to ensure that the broadest range of voices get heard – this includes both the stakeholders without whom the health system could not adequately function, as well as population groups whose views and experiences are often left behind.

“ensure that the broadest range of voices get heard”

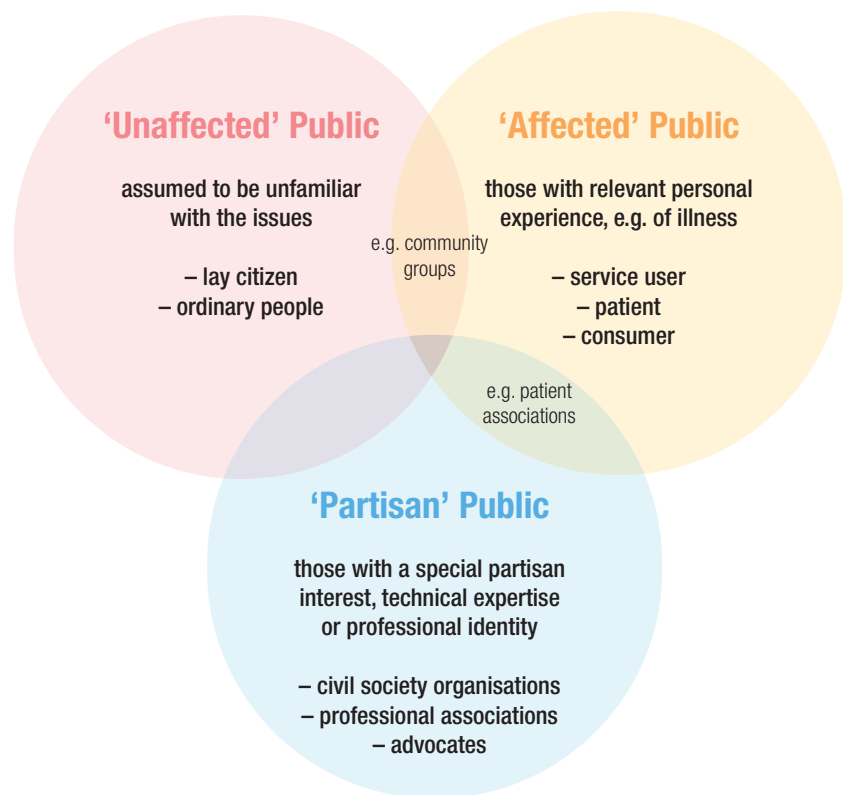
Participatory governance and people: who should participate?

What do we mean by ‘people’?

A more comprehensive and serious approach to inclusive health governance essentially means engaging with the population with the aim of making policies more responsive and implementable. Making policies implementable will certainly involve increasing acceptance by those who have an obvious stake in the health system (health professionals, private sector, patient associations, etc.) as well as its feasibility based on on-the-ground realities. But making them more responsive means addressing the broader public at large, including those who may need preventive and promotive care more than anything else, and hence are not (yet) frequent users of curative health services. Both implementability and responsiveness need to be addressed – and doing so will mean creating and sustaining spaces where both affected and unaffected parties, as well as the partisan public can express their views and provide expertise (see Figure 1).

‘People’ are in reality a blend of different – and sometimes overlapping – mini publics, with the caveat that each person or group

Figure 1: A schematic view of the 3 types of ‘publics’



Source: Adapted from [8](#)

can be defined differently based on the aim of the participatory space and the specific role participants are given.

A patient living with diabetes would clearly be an affected party in a consultation process on chronic disease policy but would play the role of a lay person if the dialogue were on adolescent sexual health. A person or group’s role within a participatory space is thus contingent on a well-defined topic and the configuration of the space itself.

Of course, people and groups are multi-faceted. The lay and partisan public can be seen as a spectrum where some groups will not neatly fit into a single category. For example, community groups may consist of a mix of affected and unaffected parties. Many participants may have more than one personal and professional identity. The categorisation can be seen as an orientation to help reflect on who should be participating, and whose views are needed for a particular policy question. Ultimately, the aim is to strike

the right balance of participants, and avoid a dominance of one public type’s perspectives over the other – depending on the policy question, of course, since some policy objectives may demand a certain preponderance of views.

The partisan public already enjoys considerable influence on policies

The ‘partisan public’ is the group often subsumed under the term ‘health stakeholder’ and represents those with a vested interest in health system decisions. They thus usually have long-standing relationships with policy makers and traditionally already hold a certain level of influence on how the health system is shaped, although this will vary by stakeholder type and country. In general, governments are accustomed to engaging with the partisan public, and thus tend to be more effective in interacting with this group in a policy-relevant way.

The ‘partisan public’ is fairly heterogenous as it can comprise of interest

groups, advocates, non-governmental organisations representing an issue or population sub-group, and professional associations among others. The policy-maker's aim of engaging with this group is grounded in the reality of policy implementability, i.e. the acute need for buy-in from, for example, medical associations, without whom policy decisions may simply not work.

The partisan public may be better funded or better organised than the other two publics, hence they may have a more dominant voice in the policy-making process than the others. This might be acceptable or not; it heavily depends on the participatory process objectives and the topic of discussion. For example, if the process objective is to address health worker burnout during the COVID-19 crisis, obviously a focused and repeated engagement with health professional associations is needed to find a policy solution which works. On the other hand, externally-funded interest groups may have vested interests which are particular to a small group in society;⁸ their dominant voice may need to be equalised with other voices.

A concerted effort is needed to bring in the voices of the unaffected and affected public

Governments tend to struggle more in their engagement with the lay ('unaffected') and affected public. With the former, many policy questions tend to be subject to one-way engagement modalities such as surveys or online questionnaires, while systematic investment in bidirectional interaction remains limited.⁹ Engagement with the affected public, especially patient associations, is recognised as significant in many places (see next section) but is often tokenistic and undervalued when it comes to uptake into policies.⁹

A targeted, additional effort is thus needed to effectively listen to the voices of the lay and affected public, and especially to channel their input into a policy discourse. This is also because government-led, more institutionalised structures have the tendency to reinforce existing societal hierarchies and power.⁷

Box 1: Experiential expertise

Experiential knowledge refers to the real-life experiences that people have as service users or community members, for example, when accessing health services in a facility, or dealing with the inability to quarantine at home. In contrast to experts or health professionals who are required to make judgments, ostensibly objectively, based on facts or specialised knowledge, lay people or patients are supposed to bring in more practical evidence based on their lived experience, or, in other words, a non-expert view. This 'expertise' is and should be more recognised among stakeholders as a source of legitimacy within a participatory space.

In the health sector, this translates into those who already have access to decision-makers and already have influence on health policies (i.e. the partisan public) consolidating their views within a policy dialogue. Specific strategies such as those mentioned in the following section's country illustrations are required to counter-balance these tendencies and give adequate weight to the experiential evidence (see Box 1) the unaffected and affected publics are able to bring to policy discussions.⁸

Using different participatory spaces to address different publics: illustrations from Europe

National Health Conference, France

The National Health Conference (Conférence Nationale de Santé – CNS) can be seen as an expression of what is termed 'health democracy' in France. The notion of health democracy became more widespread in policy circles during the HIV/AIDS crisis beginning in the 1980s and the accompanying civil society activism which led to a greater influence on health policy making (see Box 2). The term later became enshrined in the 2002 'Kouchner Law' which affirmed the right to health in concrete terms, laying out specific patient rights with redress mechanisms.⁸

It is within this context that the CNS was created in 1996.¹⁰ The French CNS is a consultative body, consisting of 97 independent members, representing a wide range of health stakeholders (partisan public and affected public). Members are drawn from patient associations, health sector trade unions, social protection funds, regional health authorities, and

regional consultative bodies for health, in addition to preventive care professionals, researchers, health service providers, and medical products providers. Despite the common practice of governments appointing consultative body chairpersons, the French CNS has retained a democratic quality by electing candidates to this office from its membership. Until 2019, the chairperson post was held by a patient association representative, rather than a health professional or medical expert.

A Secretariat within the Ministry of Solidarity and Health (MoH)'s General Directorate for Healthcare Services notably supports the CNS's day-to-day operations and dissemination of Conference results.

France's CNS is embedded in the Public Health Code,¹⁰ lending it a solid legal framework to formulate non-binding opinions to feed into national health strategies, to monitor and report annually on the state of patients' rights, and to organise public debates on relevant health issues. The mandate to organise and stimulate public debates on health matters allows the French CNS to reach out to the 'unaffected public' and bring lay voices into policy dialogue. For example, in 2017, the French CNS facilitated a public debate on the use of digital health tools and apps, the results of which formed the basis of an official CNS Opinion which was validated in 2018 by the National Commission for Public Debate.¹¹

As in many countries, the beginning of the COVID-19 pandemic was characterised by a default governance mode which was not inclusive. In France too, the CNS and its regional equivalent were not consulted in

pandemic decision-making, despite a long-standing CNS recommendation laying out the modalities to consult the population during a health crisis.¹²

The French CNS thus issued a resolution in April 2020, calling upon the government to make use of existing participatory governance mechanisms for COVID-19 policy making,¹³ especially when deciding on far-reaching public health response measures (curfews, lockdowns, vaccination strategies). In December 2020, CNS and public pressure led to the first MoH consultation with the CNS on the effects of the pandemic on overall patient care and health services. More recently, the Conference adopted a resolution¹⁴ on health inequities, representing one of the loudest institutional voices urging the French government to address inequities inherent to its COVID-19 vaccination strategy. The CNS was also a key player in policy debates on mandatory COVID-19 vaccination for health workers.¹⁵

In October 2021, the Minister of Health announced a review of French health democracy, i.e., an evaluation of the CNS and other consultative bodies, in view of operational recommendations for their future. One key issue to be studied will be the link between organised civil society in the consultative bodies and direct consultation of the population, thereby affirming the need to reach out to all types of publics in a systematised way to ensure participatory policy making.

National Health Council, Portugal

The National Health Council (Conselho Nacional de Saúde – CNS) was formed in 2017 in Portugal as a government advisory body mandated by the Basic Health Law of 1990. The Portuguese CNS's mandate is to establish an alliance across the whole of society to ensure a common vision for the future of the health system. The Portuguese CNS operationalises its mandate by consulting broadly with stakeholders and the public to feed into health policy-making processes, with the ultimate aim of promoting government transparency and accountability.

Membership consists of civil society organisations (6 fixed seats), professional associations (7 seats), trade union and

Box 2: The French HIV/AIDS movement & the role of civil society in influencing policy priorities

The HIV/AIDS epidemic in 1980s France was fertile ground for a movement led by civil society organisations (CSO) representing the beginnings of a prominent and vocal civil society landscape in the French health sector. Spurred on by the growing number of victims, the lack of available treatments, stigmatisation, and the slow adoption of adequate government policy measures, CSOs took on a prominent role in educating and mobilising the public. By doing so, they brought much-needed attention to patient rights, demanding clear action from policy makers.

As public authorities struggled to curb transmission, they gradually recognised the need to partner with civil society in the battle against HIV/AIDS, particularly in the field of prevention and risk communication.¹⁶ CSOs progressively gained trust and respect in policy making circles, leading to their own increasing expertise and subsequent influence in HIV/AIDS policy development. For example, CSOs were instrumental in the formulation of an anti-discrimination law based on health status and disability.¹⁷ They were also behind the policy decision to extend access to post-exposure treatment to anyone who feared they may have been exposed. Until that point, post-exposure prophylaxis had been reserved for health workers in the context of an occupational accident involving blood products.¹⁸

By the end of the 1990s, HIV/AIDS CSOs and French policy makers were working in a collaborative *modus operandi* to reform the epidemic surveillance system. The reform led to a national system of compulsory declaration by health professional staff of all new HIV-positive cases.

Today, studies show that France's response to the HIV/AIDS epidemic has delivered positive outcomes.¹⁹ The number of new HIV infections has broadly stabilised, with people diagnosed with HIV immediately placed on anti-retroviral therapy. The French HIV/AIDS community thus benefited enormously from the fruitful government-civil society collaboration in policy formulation and implementation.

private sector entities (5 seats), regional government representatives, and academics appointed by government, (together 10) – hence a broad mix of the partisan public with some affected public, similar to France's CNS membership. With the president and vice-president, the Portuguese CNS consists of 30 members in total, each with equal voting rights. The president and vice-president positions are both nominated by the Council of Ministers after proposal by the Minister of Health, while the 6 civil society representatives are elected by Parliament. The civil society member selection process has been called into question for its government dominance and is currently under review.

Like its French correlate, the Portuguese CNS was set up with the explicit mandate of ensuring an inclusive debate on priority health matters which feed into official

recommendations for policy.¹⁹ Besides its regular member deliberations, the Portuguese CNS reaches out to the lay public (unaffected public) by convening working groups to feed into public debate. This lay public engagement is still in its infancy, with a recent review recommending more pro-active outreach to this group,²⁰ as it is precisely those working group deliberations aimed at public interaction which has proven useful to influence COVID-19 decision making.

In 2020, working group discussions on the pandemic's impact on vulnerable communities provided valuable grassroots insights for government COVID-19 policies.²⁰ The relatively new existence of Portugal's CNS thus demonstrated that trusted access to civil society and communities is crucial during crisis situations, and can be effectively offered

when mechanisms for participatory governance are already institutionalised and have previously been invested in.

Conclusion

In this article, two examples of institutionalised participatory governance mechanisms are elaborated on to demonstrate ways in which governments can target the different types of publics to foster a true ‘health democracy’. It is important to note here that CNS in France and CNS in Portugal do not represent the only government platforms to engage with the public, communities, and civil society. A comprehensive approach to health democracy must inevitably include a plethora of participatory spaces – such as public hearings, citizen juries, focus group discussions, and others – as each space may target a different type of public with its unique mandate and objective.

A key message of this article is that policy-makers should generally be aware of the different kinds of publics when designing a coherent approach to participatory governance, and clearly recognise the existing influence the partisan public already has on the health sector. This is not to say that that influence is not legitimate, yet the partisan public’s legitimate say in health policies should not be seen as the beginning and end of health democracy. Instead, a true ‘health democracy’ must also give countervailing weight to the voices of those affected by such health policies and those to whom the health system also belongs – the ‘unaffected public’, as well as part of the ‘affected public’ whose voices may not be heard through institutional mechanisms.

Given policy makers’ health system performance objectives of improving equity and overall health outcomes, the point of participatory governance is to lift the voices of population groups where health outcomes are worse, and understand more clearly which policies need to be put in places to address those groups’ health system challenges. For this, a resolute emphasis must be placed on consulting not only those with a more evident stake in health system operations, but also those who will bear the brunt of any operational decisions.

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TRANSFORMING DELIVERY OF ESSENTIAL HEALTH SERVICES DURING THE COVID-19 PANDEMIC

By: Erin Webb, Marie-Camille Lenormand, Nathalie Schneider, Sophie Augros and Dimitra Panteli

Summary: Managing dual delivery of care, for both COVID-19 and non-COVID-19 patients and services, has been a key challenge for health care providers for nearly two years, and essential health services have faced ongoing disruptions. Against this situation, several transformations in the delivery of essential health services have emerged in Europe. These include 1) adjusting coverage and payment systems, 2) introducing new care pathways, and 3) building on the strengths of primary health care. These transformations may continue post-pandemic in certain settings and can guide action for future preparedness.

Keywords: Health Systems, Essential Health Services, Service Delivery, COVID-19

Introduction

Health care providers have had to manage the novel demands of treating patients with COVID-19 while continuing to provide other health services – the dual delivery of care – for nearly two years. While the initial response across Europe during the first wave of COVID-19 was to postpone or cancel non-urgent services, as time passed, health systems had to readjust to a new normal and ensure the continuation of essential health services.¹

The World Health Organization's (WHO) National pulse survey on continuity of essential health services during the COVID-19 pandemic found that out of 135 surveyed countries and territories, 94% experienced some kind of disruption to providing essential services between January and March 2021.² These disruptions were recorded for 63 tracer services, of which 29% were disrupted

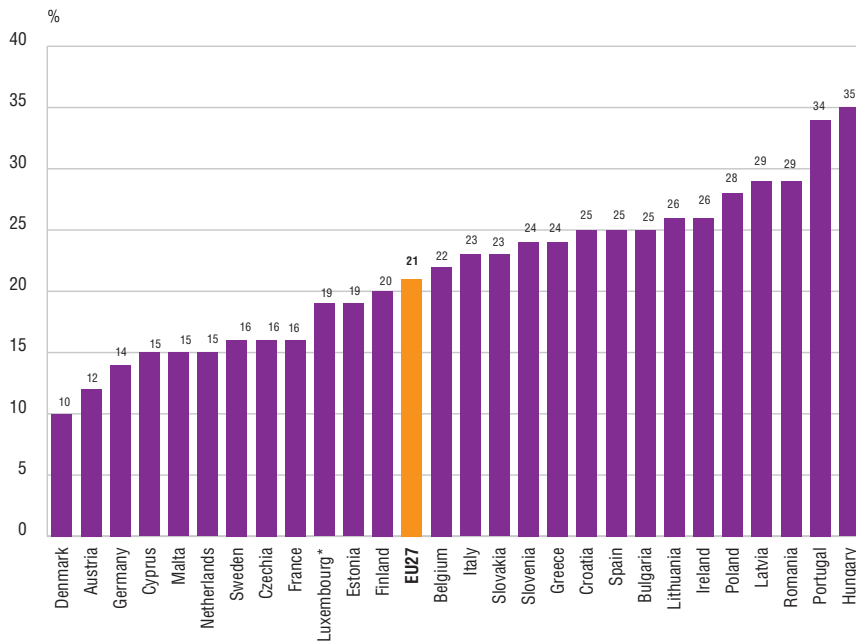
on average in the WHO European region.³ These service areas covered reproductive, maternal and child health; immunisation services; communicable and non-communicable disease services; and mental health.

Unmet medical care needs increased across Europe

The disruptions in the provision of care in order to accommodate new demands from COVID-19 led to a large number of individuals across Europe reporting unmet medical care needs (see Figure 1). According to the Eurofound survey, around 1 in 5 people surveyed reported that they needed a medical examination or treatment that they have not yet received.⁴ These unmet needs related to the measures taken to protect health care facilities from becoming overwhelmed in light of the expected influx of COVID-19 patients. The adjustments often resulted

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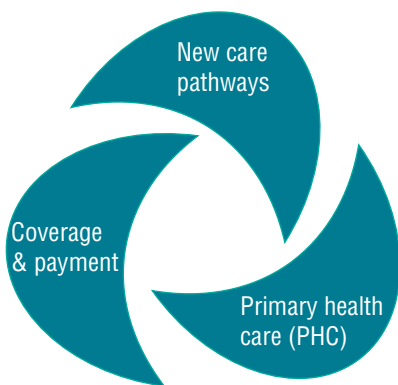
Figure 1: Over 1 in 5 people in the EU reported unmet medical care needs during the first year of COVID-19



Source: ³

Note: (*) Low reliability; the EU average is weighted (calculated by Eurofound). Figure shows the percentage of population reporting unmet medical care needs between February 2020 and March 2021.

Figure 2: Dimensions of transformation in service delivery



Source: Authors' own

in postponed or cancelled treatments and longer waiting lists (see also the article by van Ginneken et al. in this issue on backlogs and waiting lists).

For example, Denmark generally has a one-month waiting time guarantee for accessing diagnosis and treatment, but suspended this until September 2020 for psychiatric care and March 2021 for other types of care.⁴ Similarly,

Norway suspended national waiting time guarantees between March 2020 and October 2020. Accordingly, the percentage of patients who did not receive hospital-based services within their individually set maximum waiting time targets in Norway rose from 2.4% in 2019 to 7.3% in 2020.⁴

Primary care, and activities such as cancer screenings, routine immunisations and check-ups, represented one area of unmet needs. In the Czech Republic, preventative appointments for adults dropped 70% between April 2019 and April 2020.⁴ Sweden experienced a drop in the percentage of individuals receiving same-day appointments in primary care from 93% to 87%. In Ireland, 67% fewer patients attended chemotherapy sessions in Irish public hospitals between January and April 2020 compared to the same time period in 2019. In Germany, mammography screening fell by up to 97% from March to May 2020 during the temporary suspension of the screening programme. While some of the missed cancer screenings occurred after the initial lockdowns, with evidence from Denmark and Norway suggesting that the treatment pathways were less affected, this lower

level of screening requires continued assessment to understand the impact on health.⁴

Even for emergency situations, some countries saw a drop in essential services especially in the early spring of 2020, potentially due to a patients' reluctance to seek care. Belgium saw admissions for stroke decline by 19% in March and 16% in April 2020, but this recovered to more normal levels in May and June 2020. In part due to a possible reluctance to seek care, patients may have deferred treatment until their condition became more serious. The Spanish Society of Cardiology saw a near doubling of in-hospital mortality for acute myocardial infarction during the first wave of COVID-19.⁴

“measures were taken to maintain coverage for the general population

A transformation in the delivery of essential services has been developing

Given the persistent but volatile demands of COVID-19 on the health system over the past 18 months, a transformation in the delivery of essential health services can be observed across several dimensions. These include (as shown in **Figure 2**):

1. adjusting coverage and payment systems to incorporate essential COVID-19 services and maintain coverage
2. introducing new care pathways to meet patients, especially the most vulnerable, where they are;
3. building on the strengths of primary health care to deliver essential health services

Box 1: New care reimbursements introduced in France

In France, since March 2020, community care nurses can receive payments to visit COVID-19 patients at home if they have a prescription and physiotherapists can be reimbursed for the individual rehabilitation of COVID-19 patients after hospitalisation.⁵ Between 29 May and 15 September 2020, the statutory health insurance introduced reimbursement for a “post-lockdown” consultation for vulnerable and chronic disease patients, which was considered a complex consultation and priced at €46 compared to a standard GP consultation of €25. These consultations aimed at assessing the impact of the lockdown on patients’ health, ensuring the continuity of care and discussing with individuals about the protective measures they need to adopt after lockdown, in relation to their specific disease or vulnerability. In total, more than 1 million post-lockdown consultations were carried out over the period. In December 2020, a fully covered “covid prevention” consultation was set up. In these consultations, physicians could proactively contact patients at risk of developing a serious form of COVID-19, such as people with a chronic disease and socially disadvantaged groups. Other measures were taken to maintain coverage for the general population, for example a March 2020 decision to automatically extend means-tested complementary health insurance benefits to help socio-economically disadvantaged populations cope with the crisis, affecting about 5 million people.

Source:⁶

The following sections explore these three themes using illustrative examples from European Union (EU) Member States and the EEA/EFTA region.

1. Many countries have been adjusting coverage and payment systems

All EU countries considered COVID-19 treatment and vaccination as essential health services that were made available free of charge. Yet, COVID-19 testing was not necessarily covered during all phases of the pandemic, or may have required a doctor’s referral. Moreover, the number of performed tests further depended on availability of testing facilities and materials. Portugal’s National Health Service (NHS) fully covered the costs of tests, but only if prescribed by an NHS physician.⁷ France had low availability of PCR tests until the summer of 2020, and tests were only performed in hospitals for high-risk or already admitted patients. As accessibility increased, PCR tests were available without a prescription and free of charge from 25 July 2020 until 15 October 2021.⁸ After this time, only vaccinated patients have access to free PCR tests without a prescription. Norway’s Act on the Control of

Communicable Diseases ensures that tests, health visits and treatments for infectious diseases are available to legal residents and visitors free of charge, and included COVID-19 in this list in January 2020.⁹ As such, testing has remained free in public facilities in Norway.

In addition, new payments related to COVID-19 were introduced to support new services. For example, France introduced several new reimbursements for care (see Box 1). A large adjustment to coverage and payments involved the use of digital health, which increased almost universally across Europe (see article by Williams et al. on digital health). Countries including Germany, France, the Netherlands, Sweden and Switzerland already reimbursed remote consultations to some degree, but entitlements were often extended early in the pandemic.¹⁰ In France, teleconsultations have been available since 2018, but conditions of access and reimbursement changed to limit disruptions to care during the crisis. Before, the statutory health insurance covered 70% of costs for a video consultation with a physician, with the remainder covered by complementary insurance, and non-physician

appointments were not reimbursed. Between March 2020 until the end of December 2021, teleconsultation costs were fully covered for patients and doctors in a similar geographic area so that remote and in-person consultations could be mixed throughout the patients’ health care pathway. In addition, teleconsultations for midwives and medical auxiliaries (nurses, physiotherapists, speech therapists, etc.) were reimbursed as a temporary measure. Longer-term provisions for remote consultations are planned for early 2022, for example the reintroduction of cost-sharing for teleconsultations and loosened restrictions for patients living in medical deserts so that they can have access to physicians in other regions.¹¹

Other countries, including Belgium, the Czech Republic, Denmark, Estonia, Italy, Lithuania, Luxembourg, Slovenia and Romania, introduced new payments for remote consultation.¹² In the Czech Republic, health insurance funds did not generally reimburse phone or video consultations prior to March 2020, but this changed during the first wave to cover remote consultations for most outpatient appointments, and in September 2020, the funds introduced a new reimbursement code for general practitioner (GP) phone consultations that could be used during crisis periods.¹³ Denmark increased reimbursement fees to GPs and some specialists for video consultations, which were conducted via the national *Min Læge* (My Doctor) mobile application, fully funded by the Health Ministry. This contributed to an overall rise in GP consultations between 2019 and 2020, despite 13% fewer in-person visits. The Slovak Republic also allowed telemedicine for the first time with reimbursement from health insurance companies, but does not yet centrally regulate payment for these services as they differ by type of specialist.¹⁴

2. Introducing new care pathways to meet patients where they are

Across countries, the need to ensure sufficient intensive care unit (ICU) beds capacity was prioritised in order to coordinate and integrate resources (see article by Winkelmann et al. in this issue). In some cases, private sector capacity was

Box 2: L'Assurance Maladie's efforts to reach vulnerable groups during COVID-19

The statutory health insurance in France launched a comprehensive campaign of telephone calls to the most vulnerable people: those living with a disability, elderly people suffering from a long-term illness, isolated people, etc. During the first lockdown (March-May 2020), nearly 15,000 contacts were made. They were an opportunity to remind people of protective measures, to encourage them to make medical appointments when necessary and to respond – with partners – to problems such as the delivery of medicines or food shopping.

In the context of the state of health emergency, France opened up additional accommodation places for homeless individuals. A joint outreach effort by the health insurance and the family allowance scheme aims to help them access health care and their social rights. By fall 2021, this new partnership had led to more than 1,500 meetings and 5,000 actions, inter alia around opening and monitoring social security benefits, providing support for care and the use of digital technology.

The 'aller vers' ("reaching out") programme aims to bring vaccination closer to people with reduced mobility, isolated from the health care system, or in precarious situations. It encompasses assistance with travel to vaccination centres, a mobile vaccination centre, vaccination tents in certain neighbourhoods, local partnerships with associations, vaccination drives and more.

Health insurance data have been used to identify populations that are not being reached and for whom outreach actions could be implemented. Another application of this approach is currently being considered to improve participation in cancer screening programmes.

Source: ⁵

used to enable the continuation of essential health services.⁴ Many countries adjusted care pathways within hospital facilities to continue essential services and reduce the potential spread of infection. These included treating (suspected) COVID-19 patients in separate buildings or wards, having dedicated rooms for COVID-19 patients, or specific treatment times.⁴

New ways of treating patients were also introduced in primary and specialist ambulatory care. GPs in the Netherlands were advised to abolish walk-in hours, organise separate consultation hours for potential COVID-19 patients, and use remote consultations, but the volume of services still decreased. The Ministry of Health in Luxembourg quickly created a model in March 2020 of four patient access pathways: 1) teleconsultations, 2) medical visits to residents' facilities or patients' homes, 3) advanced care centres for COVID-19 patients and 4) emergency department visits.⁴

Concurrently, Luxembourg launched a remote monitoring tool for COVID-19 patients who were isolating at home, with a team of professionals from the Health Directorate checking in on these patients. This tool is planned for expansion into a permanent telemedicine solution that will be integrated into e-health services.

The expansion of telehealth provided one way to continue to connect with patients during the restrictions brought on by the COVID-19 pandemic. Physicians in Norway were advised to switch to video, phone or digital consultations on 17 March 2020, and the percentage of remote outpatient consultations rose from 3% in early 2020 to 41% during the peak of the first wave.⁴ This trend is set to continue, as there are plans for at least 15% of specialists' consultations normally conducted in hospitals to be conducted digitally in 2021.⁴ While the movement towards digital consultations does allow the continuation of some

essential services, it does not necessarily reach the larger community, in particular vulnerable groups. Some countries have introduced new means of outreach to the most vulnerable people, including the statutory health insurance (*L'Assurance Maladie*) in France (see Box 2).

3. Building on the strengths of primary health care

Many essential services are delivered by primary health care (PHC) providers and the transformations described above had a direct impact on their work and interactions with patients and other staff. The setup and adequacy of PHC systems played a crucial role in whether the implementation of the required changes to coverage, payment and care pathways were successful, as well as the effectiveness of the pandemic response as a whole.⁴

“the importance of care coordination became even more pronounced

PHC providers in several countries worked in multi-disciplinary teams, prioritised vulnerable groups for outreach, and also took on digital innovations to respond to the new conditions.⁴ PHC centres in Iceland and Spain served as the designated entry point for beginning the patient care pathway for suspected COVID-19 patients, as they conducted testing and provided medical advice. In some countries, including the Czech Republic, PHC workers were involved with contact tracing. In many countries, PHC providers were instrumental in delivering the COVID-19 vaccination campaign, including for hard to reach groups.⁴

The importance of care coordination became even more pronounced during the pandemic. In Finland and the UK, PHC providers in collaboration with local

governments proactively offered PHC services to anyone using long-term care services.¹ In France, (as of June 2021), 1,889 multi-professional health houses* and 455 multi-professional health centres aim to organise care around the patient, while 172 territorial professional health communities coordinate all service providers (e.g., nursing homes, health centers, health establishments, medico-social structures) in a particular region. The territorial professional health communities, created in 2016, have played a key role in the pandemic by coordinating different actors and they were able to adapt at short notice to find effective solutions to tasks such as organising care for COVID-19 and non-COVID-19 patients, organising screening and vaccination centres, among other responsibilities. The health crisis has shown the strength of coordination in providing patient care and will help accelerate its use in the future, contributing to a better structuring of the organisation of primary care in France.²

Conclusions

The continued provision of essential health services during the COVID-19 pandemic required new care pathways with adjusted payment methods and close linkages to primary health care. Some of these new experiences, such as remote consultations or using health insurance data to find hard to reach groups, are expected to continue post-pandemic in certain settings. The importance of strong primary care, care coordination and commitment to universal health coverage has been reinforced and can guide action for future preparedness.

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* "Multi professional healthcare homes" (maisons de santé pluridisciplinaires) are where professionals are self-employed, physically based in one or multiple practices, mostly in rural areas. "Healthcare centres" (centres de santé) – are where professionals are salaried, often based in a single group practice, mostly in urban areas.

HUMAN RESOURCES FOR HEALTH DURING COVID-19: **CREATING SURGE CAPACITY AND RETHINKING SKILL MIX**

By: Gemma A. Williams, Claudia B. Maier, Giada Scarpetti, Julie Galodé, Marie-Camille Lenormand, Katarzyna Ptak-Bufken, Isabel De La Mata, Cris Scotter and Tomas Zapata

Summary: European Union Member States have acted to rapidly scale-up, re-purpose and re-train their workforces during COVID-19 to meet a substantial rise in demand for care. We outline the varied strategies countries have taken to create surge capacity during the pandemic, broadly grouped as initiatives to: 1) increase numbers and re-deploy staff to areas of greatest need; and 2) re-skill and re-purpose the workforce to ensure sufficient skill mix. Learning from actions taken during the pandemic, and a wide-range of supporting initiatives and funding from the European Union, will help Member States build a more resilient workforce for the future.

Keywords: Human Resources for Health, Health Workforce, Surge Capacity, Skill Mix, COVID-19

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Introduction

The ability to increase the surge capacity and flexibility of the health workforce has been fundamental to delivering an effective COVID-19 response in all European Union (EU) Member States. Surge planning has been needed to meet a dramatic rise in demand for care from COVID-19 patients in acute and emergency settings, to deliver test, trace and isolate services and mass vaccination programmes, all while maintaining other essential health care services.

Expanding and maintaining workforce capacity has been complicated by high rates of infection and burnout in professionals that have been at

the forefront of the fight against the pandemic.^{1 2 3} In addition, countries entered the pandemic with differing workforce numbers and profiles. Notably, some Member States had certain skills shortages in areas that have been key during the current pandemic, such as intensive care unit (ICU) doctors and nurses and public health workers, along with a maldistribution of health workers in rural and other underserved areas.⁴ Another challenge has been that health care workers have experienced evolving skills profiles in their jobs due to quick technological progress, yet education and training systems have not always provided opportunities to keep up with these changes.

Table 1: Approaches used in EU countries to increase health workforce numbers during COVID-19

Scaling-up capacity among the existing health workforce	Mobilising and recruiting additional health workers and volunteers
<ul style="list-style-type: none"> • Asking staff to work extra hours • Changing contracts from part-time to full-time • Changing staffing requirements • Changing night shift working patterns • Cancelling leave • Changing registration requirements 	<ul style="list-style-type: none"> • Increasing recruitment quotas • Recruiting (final year) medical and nursing students • Bringing inactive or retired health professionals back to the workforce • Recruiting new health professionals • Bringing foreign-trained health professionals into the workforce • Requesting assistance from other countries or international organisations • Recruiting volunteers for nonmedical or basic medical tasks • Using military personnel to supplement the civilian workforce

Source: ⁴ ⁶

These underlying shortages and skills disparities have been exposed by COVID-19, with many countries having to take a wide-range of actions to ensure availability of sufficient numbers of health workers to respond to the demands of the pandemic. In this article, we provide an overview of the measures taken to create and maintain surge capacity in EU Member States during COVID-19. The article provides an update to a previous study that reviewed strategies to create surge capacity during the first wave.⁵ It should be noted that although surge capacity may be thought of as simply increasing numbers and re-deploying to areas of greatest need, it also involves actions to re-skill health workers, including by using digital technologies.

Scaling-up and maintaining workforce capacity

All EU Member States have taken action to create surge capacity by scaling-up capacity in the existing workforce, or mobilising and recruiting additional health workers and volunteers (see Table 1).

The most common strategies for scaling-up capacity in the existing workforce have been: asking health professionals to work extra hours, including moving from part-time to full-time work or allowing extra overtime, modifying work schedules (e.g. Croatia); suspending ongoing or scheduled external rotations for residents in training (e.g. Spain, Romania); suspending exemptions after night shifts or on-call activities (e.g. Poland, Spain); and cancelling leaves of absence

or foreign-travel (e.g. Czech Republic, Greece, Luxembourg, Spain). Minimum staffing requirements have also been suspended in some countries; Germany, for example, passed legislation to suspend acute care staffing ratios for nurses, to allow more flexibility on nurse placements in hospitals. While largely effective at creating additional capacity, these measures have the distinct disadvantage of increasing burnout among the existing health workforce.

“a shift towards remote working and a greater use of technology”

Health workers have also been brought in from outside the existing public health workforce. This has most frequently been achieved by allowing medical and nursing students near graduation to work as graduated professionals. In other cases, emergency legislation has been implemented to facilitate exceptional hiring procedures to bring in addition workers (e.g. Portugal, Spain). Other approaches used less frequently include bringing retired or otherwise inactive health professionals back into the workforce, to engage foreign-trained professionals (sometimes accelerating the diploma recognition procedures),

using volunteers for certain tasks such as manning public health helplines or trained volunteers for vaccination. Some countries have also put in place contracts for re-deployed private sector staff to work in public sector hospitals (e.g. Cyprus, Ireland, Malta) or to include private hospitals as part of the public network. In France, staff members of the statutory health insurance fund have been utilised to support contact tracing (see Box 1).

Bringing in new workers has generally necessitated training and supervision, which risks creating an additional burden for existing staff.⁶ Moreover, these initiatives have had significant governance implications in terms of requiring new contracts to be drawn up, changing or introducing legislation around malpractice compensation, modifying laws on pension contributions and amending registration procedures to fast-track new hires.⁶ It is interesting to note, however, that Belgium, Denmark and France had established “medical care reserves” prior to the pandemic, which provided a pool of inactive workers that could be deployed to help support the COVID-19 response with fewer administrative hurdles (in France, for example, 3,673 professionals from the “medical care reserves” were mobilised).

The re-deployment of health workers to health facilities or regions with greater demand has also been a core component of creating surge capacity. This has generally seen health workers re-deployed to work in different settings, such as in hospitals instead of the community or rotating between different facilities (e.g.


Box 1: Human resources dedicated to contact tracing in France

In September 2020, the French national-level statutory health insurance fund (CNAM) decided to participate in the contact tracing process by affecting some of its staff to support local Contact Tracing Platforms (PFCTs) staff. From late October to early November 2020, more than 12,000 full time equivalent (FTE) contact tracers were mobilised (at the height of the second wave). Since the end of January 2021 to summer 2021, 10,000 FTE contact tracers have supported contact tracing efforts, including 5,800 fixed-term contract staff.

Initially, only permanent staff members at the local level of the statutory health insurance (101 local agencies – called “Cpam”), including administrative staff and health care advisors working for the local medical services of the statutory health insurance, were called upon. Fixed-term contract staff (i.e. students) were later hired to strengthen the service.

Training of teams is administered by the local PFCTs, using national tools and materials, over a three-day period (one day of training and two days of situational exercises). Calls are carried out using scripts drawn up by CNAM on the basis of the tracing doctrine defined by the health authorities.

Box 2: WHO digital tool to support Human Resource for Health (HRH) planning for surge capacity

Shortly after the appearance of the first COVID-19 cases in the WHO region, the WHO Regional Office for Europe recognised that some Member States would require support in understanding the health workforce surge requirements during the pandemic. Working with contributors from WHO and collaborators in Portugal and the UK, a pair of complimentary tools were developed from scratch and launched in April 2021 following piloting to be either used individually or in concert. 

The underpinning approach was to develop tools based on readily available software that were adaptable by Member States for local circumstances and could use epidemiological data locally available or available for other sources (e.g. Imperial College London). For example, the “Adaptt Surge Planning Support Tool” allowed policymakers and planners to estimate the number of health workers required in hospitals (wards and ICUs) to respond to increasing COVID-19 workload. The health workforce requirements could be modelled based on the COVID-19 epidemiological situation in the countries. The nature of the tools allowed Member States to consider multiple staffing scenarios reflecting the need to consider skills and role shifting in the workforce in response to a shifting landscape of staff availability.

Croatia, Estonia, Lithuania, Malta, the Netherlands, Portugal, Romania, Sweden). Some countries also moved health workers to regions or cities with greater care needs (e.g. Italy, Spain). For example, in France, from the beginning of the crisis in March 2020 until 10 December 2021, 9,138 health professionals provided assistance in overseas territories. There has also been an element of cross-country collaboration to facilitate the movement

of health professionals to countries with greater need. For example, the EU Civil Protection Mechanisms enabled physicians from Norway and nurses from Romania to be deployed to Italy during the first wave. Meanwhile, patients from France, Italy and the Netherlands at the start of the pandemic were transferred to Austria, Germany, Luxembourg and Switzerland for treatment to avoid ICUs running out of capacity.

Digital tools to monitor supply and demand at local, regional and national level have proved crucial for surge planning (see the article by Williams et al. in this issue on digital health). The World Health Organization has played a key role in this area by developing software to help countries understand health workforce surge requirements (see Box 2).

Implementing flexible approaches to using the workforce: re-skilling and re-purposing

Surge did not just involve increasing staff numbers, but also required efforts to re-skill and re-purpose the health workforce. Given the specific needs of COVID-19 this often involved training doctors, nurses and other health professionals specialised in different disciplines to work in emergency departments, hospital wards and intensive care. Health workers re-deployed in ICUs and infectious diseases or respiratory medicine wards have generally received additional training, such as in use of personal protective equipment (PPE) or in the management of patients with acute respiratory failure. Health care workers have also taken on new tasks in areas such as testing, contact tracing and monitoring of COVID-19 patients (see Box 3). In other care areas such as primary care, there was a shift towards remote working and a greater use of technology including electronic health records and e-Prescriptions.

In some countries, legislation was implemented to shift the division of tasks between professions. For example, the COVID-19 Act adopted in March 2020 in Germany allowed nurses and emergency paramedics to take on some tasks previously only undertaken by doctors. In France meanwhile, community pharmacists were allowed to renew prescriptions for certain chronic conditions. Task shifting has also been seen in efforts to support testing, contact tracing and vaccination campaigns. Notably, a number of countries have newly authorised different types of health workers to perform vaccinations, including dentists (Ireland), doctors’ assistants (Germany, Netherlands), medical students (Austria, Belgium), paramedics (Austria) and pharmacists (Portugal). Non-health

Box 3: New roles of pharmacists and nurses have emerged during the pandemic in France

Pharmacists

In France, legislation was enacted in 2020 during the state of health emergency that permits pharmacists to take on new tasks, including: distributing and billing masks; dispensing pulse oximeters, drugs for medicated abortions and some drugs provided that the patients have a prescription bearing the mention “off-label drug prescription in the context of Covid-19”. Pharmacists are also allowed to perform antibody tests, rapid antigen tests, to dispense self-tests to identified professionals (employees providing home services, private employers employees, family carers working with older people or disabled) and self-tests to asymptomatic people over 3 years old. These critical provisions have been renewed under the same conditions until 31 July 2022.

Since 5 March 2021, pharmacists, through a further decree, have also been allowed to prescribe and administrate COVID-19 vaccines; vaccination can, however, only be carried out by pharmacists who are already authorised to administer vaccines. Voluntary pharmacies are also authorised to reconstitute COVID-19 vaccines and dispense them in individual, pre-filled syringes to health professionals who are authorised to prescribe and vaccinate, such as physicians, midwives, nurses and dental surgeons. In addition, pharmacists are allowed to perform samplings in the context of PCR tests.

Nurses

Additional health care services have been developed by the statutory health insurance to support and monitor positive patients in the community. Since 21 January 2021, health care support has systematically been offered to positive patients. It consists of a visit fully paid for by health insurance. Mobilisation of volunteer nurses is organised by each region, through a networking platform for a quick response (24 or 48 hours). The main objectives of this nurse home care visit are: to explain and give a reminder of the isolation guidance and protective safety measures; to identify situations of vulnerability and any material needs, such as administrative tasks, home help, meals, dropping off groceries or medicines, access to electronic communications, counselling, and so on; to report back to the patient’s general practitioner; and to offer testing for others in the household.

personnel have also been brought in to support non-clinical components of testing (e.g. Malta), tracing (e.g. Czech Republic) and vaccination programmes (e.g. Belgium, Ireland). The use of non-health personnel in these areas has helped free up health care to work on other priority interventions.

Skill mix changes have required training for health workers to develop new competencies and to adapt to new ways of working, which has been delivered online and in person. In France, the training program “REPERE COVID” has been developed with five different pathways for health care workers by the DGOS (French Ministry of Solidarity and Health) and the Conference of Deans

of Faculty of Medicines, the National Federation of Nurses in ICU and scientific societies. More than 1,500 health care workers have registered on the REPERE COVID platform. The EU has played an important role in this area, with funding made available under the Emergency Support Instrument supporting training of over 17,000 health professionals in intensive care skills (see Box 4). With respect to vaccines, training has been accompanied by the publication of clinical guidance and protocols in some countries and adjustments to payment mechanisms to compensate health workers. Implementing skill mix changes has also required support and close working with professional associations that have traditionally opposed changes either due

to anxieties over care quality and safety, or concerns over their members’ status and incomes. In addition, legislation has been needed to clarify or extend medical indemnification.

Strong European collaboration can help Member States build a resilient workforce for the future

This article has shown that a variety of strategies are available to create surge capacity during times of crisis. These range from measures to expand and maintain capacity in the existing workforce, bringing in new or inactive workers, re-deploying to areas with greater need and introducing skill mix changes to make the best available use of available health workers to meet the specific needs of the pandemic. However, in many cases, creating surge capacity was only achieved by asking health workers to work long hours in highly pressurised environments, to take on new tasks and adopt new ways of remote working. These demands risk health workers experiencing burnout and requires support measures to be put into place to enable the health workforce to recover and re-purpose (see next article for more on this issue).^{2 3}

The pandemic has also highlighted major issues in the health workforce in Europe, in particular the shortages of health and social care workers and imbalances in skill mix. Going forward, maintaining or even increasing workforce capacity is a challenge which calls for solid policy solutions. Strategic investment, improved workforce planning and increasing caps on medical and nursing students in many countries will all be important to ensure a sustained rise in workforce numbers and to help match skills with changing demands. Additionally, increasing workforce numbers in many Member States will be reliant on improving salaries, working conditions and career pathways to retain and attract health workers.

The European Commission is also providing support to policymakers in this area. The on-going health workforce projects cluster supported under the 3rd Health programme aims at improving staff retention policies and addressing challenges of medical deserts. A new Joint Action, which will be launched in 2022,

Box 4: EU training programme on intensive care medicine during COVID-19

In 2020, the EU established an intensive care medicine training programme alongside the European Society of Intensive Care Medicine (ESICM). The COVID-19 Skills Preparation Course (C19_SPACE) was a free, two-part training aimed at doctors and nurses in the EU and UK that work in hospitals, but not in intensive care.

The training was available in all EU languages and included online events, videos and podcasts, as well as training sessions run by local intensive care experts. It covered the fundamentals of intensive care, including the admission of a critically ill patient, respiratory support, sepsis and infections, alongside information on how ICUs have operated during COVID-19.

Over 17,000 doctors and nurses across the 24 EU countries and UK enrolled in the course by May 2021 and 12,086 were certified. The programme had 2,060 active trainers (doctors and nurses) and 717 were actively involved. The training has supported hospitals in re-deploying staff during COVID-19 and will also help strengthen the workforce to tackle future health emergencies.

Source: ⁸

aims to improve tools and capacities for workforce forecasting and planning. Lessons learnt from the pandemic will feed into this work as long-term planning of human resources in health care needs to consider crisis-preparedness. Meanwhile, the European Commission's 'Pact for Skills' initiative, launched in 2020, aims at improving skills of Europeans to mitigate socio-economic impact of the pandemic. It covers various sectors, with a forthcoming Pact for Skills partnership in the health area focusing on skills of health workers, in particular actions to improve digital skills and other skills needed to support the transformation of health systems. The European funds and programmes also provide opportunities for training of health care professionals. For example, the Recovery and Resilience Facility will intervene in some Member States to upgrade skills of health workers and/or to improve education systems. The Digital Europe programme also provides an opportunity for initiatives to design specialised master and education programmes in various areas, including health care. More opportunities could be exploited by Member States within the European Social Fund Plus (ESF+), which is the main European training instrument.

Better forecasting and planning will be fundamental to help build a more resilient workforce, but can only be

achieved with better data that captures distribution and skills of health workers, as well as inactive workers that may be able to join a pandemic response. Insufficient monitoring of the health workforce not only has implications for efforts to adapt and scale-up capacity during times of crisis, but is detrimental for workforce planning generally. The forthcoming Joint Action on workforce planning and forecasting under the EU4Health programme will mobilise efforts to improve data, planning tools and capacities. WHO is also supporting countries in this area by conducting assessments of the National HRH information systems, developing National Plans for the improvement of HRH information systems and strengthening of HRH data governance.

Health system recovery after COVID-19 will be dependent on the workforce. It is therefore important for policymakers to learn from the experiences of the pandemic and to take action now to scale up numbers and ensure the right mix of skills are in place to make effective use of technology and meet changing population health needs. This can help build a more resilient workforce that will be better placed to respond to any future shocks and can help deliver more patient-centred and higher quality care.

The authors would like to thank Marie-Odile Thévenon (Head of the office Steering data and decision support, General Directorate for Healthcare Services, Ministry of Solidarity and Health, Paris, France), Christophe Andréoletti (Project Manager of the office Steering data and decision support, General Directorate for Healthcare Services, Ministry of Solidarity and Health, Paris, France) and Nadia Aissaoui (Medical Advisor to the General Directorate for Healthcare Services and Professor in Intensive Care Medicine, Hôpital Cochin, APHP and University of Paris, France) for their contributions to this article.

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HUMAN RESOURCES FOR HEALTH DURING COVID-19: **SUPPORTING AND PROTECTING HEALTH WORKERS**

By: Gemma A. Williams, Giada Scarpetti, Magrieta Langins, Ingrid Callies, Alexandra Fourcade, Ewout van Ginneken and Claudia B. Maier

Summary: Health workers have worked long hours in highly stressful environments during the COVID-19 pandemic, which has had enormous implications for their physical and mental health. European Union Member States have put in place a wide range of measures during this uniquely challenging period to protect and support health workers and to help guide professionals facing difficult ethical decision-making in patient care. In the future, the recovery of health systems will be dependent on ensuring continued support for health workers to reduce absenteeism, turnover and early retirement. This will require continued mental health support, along with wider reforms to improve working conditions and working lives.

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Keywords: Health Workforce, Mental Health, Ethics, COVID-19

Introduction

Health workers often work long hours in demanding and stressful work environments, but these pressures have increased drastically during the COVID-19 pandemic. Many health workers have had to care for very sick and dying patients, while adhering to strict hygiene measures and other COVID-19 restrictions. Some have taken up new roles and sometimes unfamiliar tasks, while others have had to adapt quickly to a shift to remote working. Moreover, health workers have had to deal with practical barriers to working as a result of measures implemented to reduce the transmission of COVID-19, such as

closure of childcare facilities and schools or reduced public transport. These factors together have taken a dramatic toll on the health and wellbeing of health workers across the European Union (EU); rates of anxiety, fear and emotional distress have substantially increased, linked to feelings of helplessness, lack of support and essential personal protective equipment (PPE), the trauma of COVID-related deaths and fear of transmitting the virus to friends and family.^{1 2}

The high demands placed on health workers have seen EU Member States take action to create safe working environments, as well as to support mental

Table 1: Strategies to protect and support health workers in EU Member States during the COVID-19 pandemic

Support strategy	Implementation examples
Protecting physical health	<ul style="list-style-type: none"> • Putting in place hygiene measures in health and long-term care facilities • Ensuring sufficient and appropriate personal protective equipment • Providing regular testing for health and social care professionals • Putting in place isolation procedures • Moving vulnerable staff to remote roles • Shifting towards remote consultations where appropriate
Mental health and wellbeing support	<ul style="list-style-type: none"> • Providing helplines, websites or apps offering counselling or referrals for additional support • Provide guidance and support on the ethical aspects of working during a health crisis • Offering remote counselling sessions • Organising wellbeing sessions in health facilities • Teaching self-care • Relaxing rules to access mental health support
Financial compensation	<ul style="list-style-type: none"> • Awarding bonuses to health and social care workers working with COVID-19 patients or in long-term care • Offering vouchers or financial compensation of childcare for health workers • Defining COVID-19 infection as an occupational disease, entitling health workers and their families to sick leave or compensation
Other practical support	<ul style="list-style-type: none"> • Keeping schools open for children of essential workers • Providing free parking, free transport to health workers • Free accommodation if shielding family from potential transmission • Campaigns to reduce discrimination against health workers • Continuing medical education credits

Source: ⁵

health, provide guidance on ethical aspects of working during a health crisis, and to provide practical support to enable health workers to continue working effectively. In this article, we provide an overview of the strategies that have been adopted to support health workers, both in clinical settings and outside; an overview of these strategies is provided in **Table 1**. This work provides an update to a previous study that reviewed strategies to protect and support health workers during the first wave.⁵ Here, we cover a longer-time frame, with data extracted from the COVID-19 Health System and Response Monitor⁶ from April 2020 to July 2021. We conclude by considering some reforms to improve working conditions and working lives that may be needed in the future to help support health workers further and help reduce the potentially high number of staff that may choose to leave their profession.

Measures to protect physical health within clinical settings mainly focuses on mitigating against the risk of infection

Being at the forefront of treating COVID-19 patients has placed health workers at high risk of infection. To reduce this risk, health facilities in all Member States have had to put in place preventative measures such as hand and respiratory hygiene/cough etiquette, alongside ensuring provision of sufficient PPE, regular testing and enforcement of isolation procedures. In the early stages of the pandemic, however, logistical issues combined with the global shortage of sufficient PPE and difficulties in scaling-up testing facilities in many countries made the provision of PPE and routine testing immensely challenging.⁵ It should also be noted that working in full PPE for long hours has placed an extreme physical toll on many health workers, adding further to stress and exhaustion levels.

More recently, it has become paramount for countries to ensure health workers have access to vaccinations. Given limited availability early on, almost all Member States identified health care workers as a priority group to receive COVID-19 vaccines. Some countries (e.g. France, Greece, Italy) have since mandated compulsory vaccinations for some or all health workers to promote uptake and help protect health workers and patients.

To further protect health workers, some countries have moved older health workers or those with chronic conditions that make them vulnerable to COVID-19 away from face-to-face interactions with patients. The huge shift towards remote consultations in care areas such as primary care has played a key role in keeping staff safe (see the article in this issue by Williams et al. on digital health). Some health providers or regional/national governments have also provided free accommodation for health

workers unable to self-isolate at home to reduce the possibility of transmission and to protect family members.

Implementing measures to protect the physical health of health workers has required coordinated governance actions across the health system. For example, national or regional policies have been needed that define infection control policies and minimum standards of PPE use in different health and long-term care facilities and for different types of health worker.⁷ Systems for monitoring PPE supply and distribution and the development of regular testing and isolation procedures have also been required.⁸ Managers and employers meanwhile have played an important role in protecting the health of their workforce by creating and ensuring a safe working environment, training staff on infection control measures and use of PPE, monitoring and reporting PPE supply and demand, and monitoring staff absences.

Measures to support mental health and wellbeing are becoming more accessible

The stress and intensive workloads during the sustained period of COVID-19 has increased the risk of mental health problems and burnout for frontline workers, with some groups of the health and care workforce facing more risk factors than others.⁷ Research shows that as many as 43% of frontline workers are experiencing significant levels of anxiety, with a prevalence of 27% in nurses and 17% in medical doctors, higher levels than before the pandemic.⁷ A further study reported that as many as 40% of clinical staff working in intensive care met the clinical threshold for post-traumatic stress disorder.⁹

In light of increasing levels of stress and psychological disorders, the majority of Member States have put in place measures during the pandemic to protect the mental health and wellbeing of health workers. In most countries, this support took the form of governments, professional associations and/or health providers establishing helplines, apps or online resources where health workers could seek support and, if needed, referrals for further help. Free

Box 1: WHO support in gathering evidence on mental health and wellbeing support for health workers

In the fall of 2020, WHO/Europe responded to the call of Member States to gather intelligence and experiences across the region on how to support the mental health of their health and care workforce. The Regional Office organised a three-part webinar series looking at the government, organisational and civil society responses to support the health and care workforce, including the informal care workforce. These webinars helped shed light on:

1. the spectrum of practical tools and interventions that have been used across the WHO European Region to support the mental health and wellbeing of the health and care workforce and their employers in relation to stress management, psychological support and mental health care;
2. new ideas and approaches for countries that have not started rolling out support; and
3. how such tools have been rolled out or integrated into the response to COVID-19 outbreaks at community and national levels.

The full report can be found here: [10](#)

remote counselling sessions have also been made available in some countries (e.g. Denmark, Finland, Italy, Lithuania, Malta, Poland). Other types of support have included training on self-care provided online or by health providers, the establishment of a “buddy-system” whereby health professionals can talk to a matched peer and health providers offering mindfulness and wellbeing sessions.

“health workers will be key to allowing health systems to recover

Alongside the implementation of targeted mental health support, initiatives to manage the work environment, such as through implementation of breaks, ensuring the availability of staff break rooms and beds and sufficient staffing levels, were also important for protecting mental health, and will be so beyond the crisis period. The World Health Organization (WHO) Regional Office

for Europe has supported countries in developing mental health support for health and social care workers (see Box 1).

Putting in place mental health and wellbeing initiatives has had important governance implications. Changes in regulation have been required in some countries, for instance to relax requirements on seeking help during working hours, to make counselling available for free, or to remove limitations on seeking help directly and not via an employer.⁸ The development and provision of guidelines by professional associations or government actors on protecting mental health and wellbeing aimed at employers and health workers have also been important in shaping mental health initiatives. Managers and employers also had to play a critical role in creating a supportive work environment to ensure health workers feel able to seek help when required. New, targeted funding has also been needed in many instances; for example, in Sweden the government provided SEK 150 million (about €14.6 million) in crisis support for staff who have undertaken COVID-19 related work with older people in long-term care.

The mental health burden for health workers has been exacerbated by feelings of moral injury, which arise when health

Box 2: Measures in France to support health professionals with ethical issues that emerged during the COVID-19 pandemic

In March 2020, the French National Consultative Ethics Committee (CCNE) issued an opinion at the government's request on *Ethical issues in the face of a pandemic*.¹¹ This opinion proposed that "health care teams need ethical support, which could be provided by an ethical support unit".

The 15 Regional Ethical Reflection Centres (ERER) have all taken up the CCNE's proposal and have created ethical support units (CSE) throughout France.¹² The ERERs, with the constant support of the Ministry of Solidarity and Health, anticipated the need for providing assistance to professionals dealing with ethical questions as a result of caring for COVID-19 patients and public health measures taken to address the pandemic. Actions were developed to respond to this need by consulting with professionals to establish their concerns on ethical dimensions, helping them with ethical dilemmas, and guiding them with the help of ethical reflection tools (i.e. an ethical reflection grid, asking questions and then applying major ethical principles, etc.). These issues were analysed at local level, and where justified, at the national level.

Upon reflection, it was found that health professionals indeed needed this reassurance due to their concern about whether their practice may deviate from ethical principles. The main concerns related to the decision to provide care; maintaining links (especially between patients/residents and their families); support at the end of life; mortuary/funeral; home confinement; governance and organisation of care; consent for testing; support for ethical reflection; health democracy; the suffering of carers; and research ethics. From March to September 2020, the CSEs dealt with 245 referrals (including 21 self-referrals), primarily from health care professionals and managers of hospitals, care homes and other institutions.

By taking account of the perspectives and ethical questions of health professionals as well as patients, governments can endeavour to move towards more inclusive and participatory health policymaking (including in times of health crisis), which is a challenge for health democracy (see the article by Rajan et al. in this issue).

workers have to act against their beliefs or values; for example, by being unable to provide appropriate care due to resource constraints or watching patients die without friends or family present. In recognition of these challenges, the Minister of Solidarity and Health in France asked the National Consultative Ethics Committee to consider the potential ethical issues facing health workers during the pandemic and potential options for providing support (see Box 2).

Strategies to provide financial support have compensated for lost income or offered bonuses

Most countries have also provided financial support to health workers. In many cases this has been to compensate

for income lost during the pandemic (see the article by Webb et al., for more details), but in other circumstances it has been to reward health workers for their work during COVID-19. This was usually provided through bonus payments (e.g. Estonia, France, Greece, Germany, Hungary, Italy, Romania) or occasionally monthly salary increases for the duration of the crisis (e.g. Latvia, Lithuania). In France, financial bonuses have been awarded to all staff working in public hospitals, staff working in private hospitals that care for COVID-19 patients, and those working in nursing homes. The bonuses paid depended on how severe the COVID-19 outbreak was in the region: ranging from €500–1,500 for health workers and from €1,000–1,500 for nursing home staff. Allied health

students that participated in handling the second wave of the pandemic also received financial compensation of €550 per month.

In addition to bonuses and salary increases, some countries have recognised COVID-19 as a work-related injury for health care staff, enabling them to access associated benefits (e.g. Denmark, France, Lithuania, Spain). In Lithuania, Romania and Spain, health workers' families are also entitled to receive a lump sum payment if a health care worker working with COVID-19 patients dies due to COVID-19 infection. In Spain, Social Security will consider COVID-19 as the cause of death if the fatality occurs within five years after the onset of the infection. Furthermore, to support prevention efforts, doctors in Poland received 100% of their salary if they were required to quarantine or isolate.

Additional support measures included providing childcare, continuing educational credits and efforts to reduce discrimination

In the early months of COVID-19, health workers were often viewed as "heroes" and received a wave of support and goodwill from the public. But as the pandemic progressed, health workers in many countries have faced increasing hostility, anger and sometimes violence.¹³ There are a variety of reasons for this occurrence which may emanate from members of the public viewing health workers as an infection risk, or those who felt the threat from COVID-19 was overstated and were protesting COVID-19 prevention measures and vaccinations. In some cases, professional associations, health providers and occasionally governments have publicly called for this abuse to stop. In Poland, for example, the University Hospital in Zielona Góra together with the Polish Radio West promoted a 'support the medic campaign' (*#wspierajmedyka*) to reduce discrimination and harassment against health workers. Overall, however, actions and legislation to address this issue have been lacking.

Interventions that countries have taken to control the spread of COVID-19, such as closing schools and childcare facilities and reducing public transport, have

created practical barriers to working for some health workers. To help overcome these challenges, special provisions were implemented in some countries to keep schools and childcare facilities open for key workers, including health care staff (e.g. in Austria, Belgium, Czech Republic, Denmark, France, Germany, Vilnius Municipality in Lithuania, Netherlands, Portugal). Free transport and accommodation were also provided in some countries in initiatives either from national or local government or individual health providers (e.g. Hungary, Malta, Poland, Romania). Health workers in Helsinki, Finland meanwhile were granted free parking near health facilities.

“Improve working conditions and working lives”

Another example of support for health workers in some countries has been to reward them with continuing education credits for their work during the pandemic. In Italy, for instance, doctors, dentists, nurses and pharmacists who continued working during the COVID-19 pandemic have been awarded 50 Continuing Medical Education (CME) credits for the year 2020.

Conclusion: Improved mental health support and working conditions are needed to support health workers during the pandemic and in the future

The COVID-19 pandemic has placed health workers under high and sustained pressure. Even when the pandemic eventually subsides, many of these pressures are likely to remain as health systems grapple with addressing care backlogs that have emerged as a result of postponed care and which may have been worsened by staff leaving the profession due to exhaustion and burnout during the pandemic (see the article by van Ginneken et al. in this issue on addressing backlogs and managing waiting lists). Health workers will be key towards the recovery of health systems after the pandemic,

but can only do so effectively if they are supported and allowed to recover themselves.

This article has shown that a number of physical, mental health, ethical, family, and financial support options were available to help support health workers during the COVID-19 crisis. While these were often adopted temporarily during the specific circumstances of the pandemic, many will remain relevant in the future as strategies to help to improve working conditions and working lives. For example, long-term solutions for the provision of appropriate mental health and wellbeing support for the workforce will be an important element going forward as will the development of systematic procedures to capture and respond to ethical questions of health professionals. The increase in harassment and violence against health workers, in some countries, is also a concerning development that needs highlighting and may require legislation to address.

A long-standing challenge for some Member States will be to improve salaries and other financial compensation to increase retention and reduce migration to countries that offer better remuneration. It will be equally imperative for Member States to take action to improve work-life-balance and working conditions, such as by enforcing limits on working hours and rest requirements and providing, for instance, break rooms and staff beds. Guaranteeing appropriate training and career pathways to support progression will also prove vital to attract and retain health workers. However, efforts to improve working conditions, work environments and work-life-balance will be more successful if they are part of wider actions to improve the number and skill-set of the health workforce across Europe.

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COVID-19 AND THE USE OF DIGITAL HEALTH TOOLS: OPPORTUNITY AMID CRISIS THAT COULD TRANSFORM HEALTH CARE DELIVERY

By: Gemma A. Williams, Nick Fahy, Dalhia Aissat, Marie-Camille Lenormand, Louisa Stüwe, Isabelle Zablitz-Schmidt, Samuel Delafuys, Yann-Maël Le Douarin and Natasha Azzopardi Muscat

Summary: Prior to COVID-19, there was much unrealised potential in the use of digital health tools across Europe. Many digital health tools nevertheless became an immediate necessity during the pandemic and their use increased substantially to support communication and information, surveillance and monitoring, the provision of health care, and rollout of vaccination programmes. Changes to regulation, reimbursement, technical infrastructure investment and training for health professionals have been needed to facilitate uptake. Active strategies are now required to promote continued use of digital health. European Union funding and initiatives such as the European Health Data Space will support progress in this area.

Keywords: Digital Health, Remote Consultations, Regulation, COVID-19

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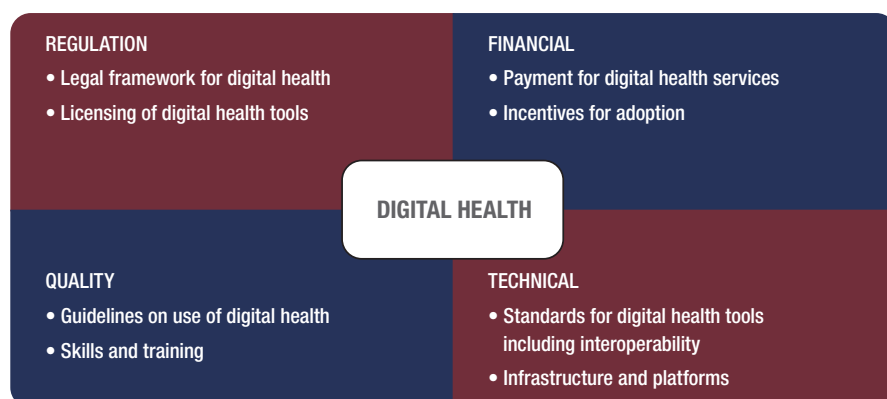
Introduction

Digital health means the use of digital technologies to improve health. In principle, digital health technologies hold the potential to bring about major improvements in the efficiency of the health system, both in terms of care provision and the administration of the system as a whole. In practice, realising this potential in health care across Europe has proved to be a complex endeavour, with very mixed results.¹

Prior to the COVID-19 pandemic, much unrealised potential for digital health remained across Europe despite much effort, with wide discrepancies between

countries in terms of policy and strategy development and implementation. While countries such as Estonia, Denmark, the Netherlands and Sweden were relatively advanced in this area, others were less so.^{2,3} Many of the biggest challenges to uptake have not been technical in nature, but instead stem from difficulties in making changes to wider processes of health and care. Facilitating the uptake of digital health tools requires a complex range of policy actions targeting regulation, financing, quality improvement and technical infrastructure (see Figure 1), but developments in many of these areas remained lacking. Across the region, insufficient investment, lack of a supportive and clear legal

Figure 1: Policy mechanisms to support uptake and use of digital health



Source: ¹

framework, concerns over use from health professionals, gaps in planning and support for implementation, and inadequate leadership have all played a critical role in stifling adoption.⁴

“went from an interesting potential opportunity to an immediate necessity”

The unique challenges generated by the COVID-19 pandemic have nevertheless created new needs and abruptly changed the motivation to make use of digital health. In many instances, digital health tools went from being seen as an interesting potential opportunity to an immediate necessity providing the impetus for very rapid development and uptake in practice. In this article, we summarise how digital health tools have been used to support the COVID-19 response across Europe, consider the policy actions that were taken to facilitate uptake, and highlight what needs to be done now in order to promote greater use in the longer term. We also reflect on how this can be supported by European-level initiatives such as the European Health Data Space (EHDS).

This article summarises findings from a recently published European Observatory policy brief by Fahy et al. (2021) on the ‘Use of digital health tools in Europe: before, during and after COVID-19’; we encourage you to read the full brief to find out more about this topic.⁵

How has digital health been used during the COVID-19 pandemic?

Digital health tools have been used to respond to COVID-19 in four principal areas: communication and information; monitoring and surveillance; supporting provision of health services; and vaccination.

Communication and information

Most countries have set up and implemented digital tools and platforms to collect and share data and information about COVID-19, either through existing tools or ones that have been specifically developed to better monitor the pandemic. This has included the creation of web pages and dashboards displaying key data such as on number of cases, deaths and vaccination rates. Apps have also been developed to communicate with the public, to provide information about the virus, to support recognition of symptoms, to connect with health services or to enable reporting of symptoms (e.g. Austria, Bulgaria, Italy).

At the national level, national health data gateways have been particularly important in response to the crisis by supporting COVID-related research projects, such as the Health Data Hub (HDH)

in France, a single gateway to access health data.⁶ The HDH was officially created by law in late 2019 upon the request of the French President following a parliamentary mission on Artificial Intelligence. The HDH seeks to provide simple, unified, transparent and secure access to health data for public interest research, in compliance with regulations and citizen’s rights. The HDH also has the role of federating the French health data ecosystem and has been extremely active in European-level initiatives like the EHDS.

There have also been international and European and international initiatives to promote the use of health data. For example, PHIRI (Population Health Information Research Infrastructure) is a new health information project on COVID-19 financed by the European Commission, launched in November 2020, that includes 41 partners from 30 different countries. PHIRI supports research across Europe on health and well being of populations impacted by COVID-19. The aim is to share data and expertise between countries through a health information portal on population health in close interaction with key stakeholders in the health information landscape, in particular the European Centre for Disease Prevention and Control (ECDC), EUROSTAT, Joint Research Centre (JRC), the OECD, and the World Health Organization (WHO).⁷

Digital health tools have also proved pivotal in combatting misinformation on COVID-19. Countries have launched various initiatives such as chatbots or used social media platforms to help combat misinformation.⁸ In France, for example, mesconseilcovid.fr, a general public information site, was launched to enable everyone to know how health and sanitary measures applied to their own situation. France has also had a policy of open data relating to the health crisis to reduce misinformation. In contrast to their approach on other health issues, social media platforms have also begun to actively address misinformation relating to the pandemic and the European Commission has established a monitoring programme to assess the activities of social media companies in this area. Misinformation remains an

Box 1: Use of remote consultations in France during COVID-19

The use of teleconsultation has tremendously increased in France during the COVID-19 pandemic, with a total of 19 million teleconsultations reimbursed in 2020. A peak was recorded in April 2020 with 4.5 million teleconsultations (compared to 40,000 in February). The pace remained steady thereafter with 1.9 million teleconsultations in December 2020. About 80% of all teleconsultations were carried out by general practitioners (GPs) and the main other medical specialties were psychiatry, endocrinology, pneumology and paediatrics.

Teleconsultations have been reimbursed by the statutory health insurance since September 2018, provided they meet strict requirements (only for physicians, who had at least one face-to-face visit with the patient during the previous 12 months, in remote or under-served areas, provided through dedicated software). These requirements were drastically loosened to meet patients' needs, during the pandemic; most health care professions were allowed to provide teleconsultations (including nurses and physiotherapists), they were permitted without a previous meeting with a patient, and through all technologies available, even by telephone (under certain conditions).

The increased adoption of teleconsultations by professionals and patients is likely to remain. This started to be translated concretely in September 2021, through a contractual agreement, signed by physicians' associations and the statutory health insurance, which permanently removes the criterion of prior knowledge of patients.

ongoing concern, especially in the area of vaccine hesitancy and adherence to non-pharmaceutical interventions.

Monitoring and surveillance

Most countries in Europe were already using digital health tools to support infectious disease monitoring and surveillance prior to the pandemic, but these systems have been adapted and enhanced. More novel ways of using digital health tools to support monitoring and surveillance have also emerged, such as genomic surveillance to track new genetic variants of SARS-CoV-2, and the use of transport and mapping information to track movement patterns and to help monitor the spread of the virus.

Mobile apps to support contact tracing operations have also been launched across the EU. In France, for example, "TousAntiCovid" (or "AllAgainstCovid") uses the phone's Bluetooth connection to detect other users' phones nearby. Users activate it at appropriate times, such as before entering public transport or shopping malls. If a user tests positive for COVID-19, they can scan a code provided by the lab which will then send an

anonymous alert to users who have been in close proximity to them. The European Commission has supported this area by establishing the European Federation Gateway Service, which facilitates interoperability to ensure national contact tracing apps can be linked and work across borders.

A further success story was the conception and implementation of the EU Digital COVID Certificate which required the establishment of shared technical recommendations and regulations.⁹ This achievement, from design to implementation, made it possible to establish an international standard in only 12 weeks, mobilising a large number of Member States and EU actors.

Mobile and web-based applications have also been launched to support remote symptom tracking and self-diagnosis in many countries or to support or enforce self-isolation and quarantine. However, approaches in the later area raise concerns about privacy, the role of state and the acceptability of different forms and degrees of monitoring. The WHO and

the ECDC have developed an indicator framework to evaluate the effectiveness of digital proximity tracing solutions.⁹

Provision of health services

The use of remote consultations has proved critical to support the continuation of essential health care after non-urgent face-to-face care was suspended in most countries. While remote consultations have most often been used in primary care, they have also been used in secondary care, more widely across different types of care and for remote management of COVID-19 patients with mild symptoms or recuperating at home after hospital care. An example of the accelerated use of remote consultations in France can be seen in **Box 1**. The use of remote consultations has not been without challenges, though, such as determining when and for whom they are appropriate and sufficient.

Digital tools have also been used in some countries to help health facilities and regions manage patient capacity by monitoring in real-time information such as on free ventilation places, intensive care capacities and COVID-19 cases (see the article by Winkleman et al. in this issue on critical care). Some countries have also used digital health tools to match demand for health workers with supply, most often through web-based online portals (e.g. Estonia, Germany, the Netherlands).

Artificial Intelligence is being used in some countries to provide the rapid identification of COVID-19 infections and potential treatments. In this area, the Commission has supported the use of pan-European high performance computing to help identify existing drugs that could be repurposed to help treat COVID-19 via the EXSCALATE4COV consortium.

Vaccination

Digital health tools have played a key role in the effective rollout of vaccination programmes, which have been unprecedented in terms of their scale and speed. Most countries have made use of text messaging or online services to contact individuals eligible to receive a vaccination and for appointment booking and to support logistical issues such as

distribution to health facilities and storage. In addition, countries have had to develop prioritisation categories for vaccines, requiring identification of particular population categories such as on the basis of age or chronic condition; this has relied on having digital health systems that store this information or that link with other information systems. Digital systems have also been needed to monitor and provide rapid data on any adverse reactions, while the issuing of digital vaccine or immunity certificates have been used to support the re-opening of economies and schools.

What policy mechanisms were used to support implementation of digital health during the pandemic?

Facilitating the greater use of digital health tools during the pandemic has required policy action across the four dimensions outlined in **Figure 1**.

Regulation

Many countries relaxed regulations on the number of remote consultations that could be conducted, what type of health professional could provide them, and who could access them. In the Netherlands and France, for instance, patients were allowed to make use of remote consultations even if they had not had prior face-to-face contact with the health provider, while Poland amended legislation to allow remote consultations to be used in non-emergency situations. A number of countries have also implemented emergency legislation to open up the use of digital health solutions such as enabling e-prescription (e.g. Austria, Greece, Ireland, Italy, Malta), allowing remote certification of sickness absence from work, or increasing scope of use of digital health in social care.

Although data privacy concerns have been prominent in discussion of concerns about digital health before the pandemic, they have had a relatively low profile as a policy issue during the pandemic, although some countries have specifically relaxed data protection rules during this period (e.g. the United Kingdom). Some countries have also made formal regulatory changes to existing laws in order to enable digital health solutions to be used. Finland, for

example, provided a limited-duration legal basis for their national proximity tracing app, while others have made changes on the basis of executive authority rather than through legislative changes.

Financial mechanisms

Reimbursement rates for remote consultations have been adjusted in many countries to compensate for income lost from reduced face-to-face consultations (see article by Webb et al. in this issue on transforming delivery, for more information). This has included adding specific reimbursements for COVID-19-related consultations (e.g. Belgium, Denmark, Ireland, Romania) or expanding reimbursement for other conditions or more broadly across the health system, with remote health services generally reimbursed at the same or a higher rate than face-to-face consultations (e.g. Denmark, Estonia, France, Italy). These changes, however, have generally not taken the form of a general opening up of reimbursement for digital health; rather, countries with reimbursement limits have more typically expanded the scope of which professions can now provide remote consultations or the type of consultations that can be provided or both.

Greater investment has also been made to promote the use of digital health tools both during the pandemic and longer-term. In Ireland, for example, the 2021 budget committed €58 million to develop eHealth and ICT infrastructure as key drivers of efficient flows of health data. In Germany, meanwhile the Ministry of Health provided €50 million to public health offices to support upgrading of hardware and software for contact tracing and the training for use.

Quality

Efforts to promote quality improvement in the use of digital health tools have focused on training health workers and developing their competencies. This has occurred alongside a more general shift to distance learning for health workforce training. In Italy, the National Institute of Health (ISS) has set up dedicated webinars and distance learning courses, which also earn health professionals Continuing Medical

Education (CME) credits. A small number of countries have targeted the provision of training on remote consultation to clinicians (UK, Sweden), or the development of professional guidelines on safe use of remote consultations and e-prescriptions (Malta, France). There have also been adapted pathways for care, such as enabling remote consultation between GPs and specialists in order to minimise referrals to hospitals (the Netherlands, Croatia).

Technical infrastructure

While some technologies used during COVID-19 were new, most built on and adapted pre-existing solutions. The most high-profile area of new digital health infrastructure has been the development of specific applications for contact tracing in relation to COVID-19. This has required substantial investment within individual countries, as well as increasing coordination at the international level both through the public sector (in particular through the WHO and through the European Commission's eHealth network) as well as the private sector through the initiative by Apple and Google to provide a specific type of common platform for such applications. Some countries have also created additional platforms, such as to monitor patients remotely or to manage supply and demand for personal protective equipment, other equipment and intensive care facilities.

How can policymakers build on the progress made with digital health during COVID-19?

Digital health tools have formed an integral part of pandemic responses across Europe to support communication and information, surveillance and monitoring, the continued provision of health services, and transitions from pandemic-related restrictions. Digital health tools can help deliver more efficient and patient-centred care, but their sustained use and acceptance by EU citizens needs the support of all actors. So far, the primary focus of policy has been on removing limitations to the uptake of digital health tools, but the future focus should be on learning from the initiatives undertaken during this time and identifying policies

and practices that can be put into place to create a supportive environment for the expanded use of digital health tools.

The development of national or regional policies and strategies on digital health that move beyond eHealth and also target mHealth and big data analytics will become increasingly important as these applications advance. Gaps in existing regulation, such as on liability and reimbursement levels, also need to be addressed in many countries. Even with a strong legal framework, concerns may arise that require clear values, communication and engagement to address. Notably, the development and application of digital health tools typically involves cooperation between the public and private sectors, which can raise concerns over trust and appropriate use of data. The governance of these partnerships needs to be tackled as part of the overall strategy for effective development and use of digital health tools. The establishment of the EHDS, as proposed by the European Commission, will help ensure that more and better health data becomes interoperable and available for reuse for research and policy making, while ensuring that the future health data sharing governance will remain under citizens' control (see Box 2).

Greater strategic investment is also needed over the longer-term to support developments in digital health. This should target both the development of infrastructure within the health setting and outside (e.g. internet provision) and research and development to ensure that technologies continue to evolve. Moreover, financing strategies must encompass the individual, organisational and system changes involved in its use, such as putting in place pragmatic reimbursement provisions for digital health tools. Various European Commission initiatives including the EU4Health programme in response to COVID-19 and the Recovery and Resilience Facility fund will help support longer-term strategic investment in digital health (see the article by Mauer et al. in this issue on a European Health Union). The WHO Regional Office for Europe is also supporting countries in

Box 2: The European Health Data Space will work to promote access and the exchange of digital health data

Following the publication of the European Data Strategy in early 2020,¹⁰ the creation of a European Data Space has been one of the priorities of the European Commission 2019–2025, including for the health sector. Indeed, the COVID-19 pandemic has highlighted the importance of having timely access to health data for research and policy making purposes, and the European Council has recognised the urgency to work towards a common European Health Data Space (EHDS).

The EHDS will promote better exchange and access to different types of health data (electronic health records, genomics data, data from patient registries, claims data etc.), not only to support health care delivery, referred to as primary use of health data but also for health research and health policymaking purposes, the secondary use of health data.¹¹ A European legislative proposal following a public consultation and impact assessment in 2021 is expected in 2022.

The goals of the EHDS are to:

- promote safe exchange of patients' data (including when they travel abroad) and citizens' control over their health data
- support research on treatments, medicines, medical devices and outcomes
- encourage the access to and use of health data for research, policy making and regulation, with a trusted governance framework and upholding data-protection rules
- support digital health services
- clarify the safety and liability of artificial intelligence in health.

Box 3: WHO Regional Office for Europe: Leveraging digital transformation for better health

To leverage and scale up a digital transformation for better health and to increase capacity to align investment decisions in digital technologies with health system needs, the WHO Regional Office for Europe will work with other agencies, Member States, academic institutions, civil society, and the industry in developing a Regional Digital Health Action Plan¹² with four main areas of focus:

- 1) Setting norms and providing technical guidance to synthesise evidence and formulate guidance to support decision-making in digital health;
- 2) Enhancing or developing digital health strategies to support countries to strengthen their capacities to better govern digital transformation in the health sector;
- 3) Building networks and promoting dialogue and knowledge exchange to convene and facilitate dialogue with partners and stakeholders to steer the agenda for digital health innovation; and
- 4) Horizon-scanning and landscaping for solutions that can be scaled at country or regional level to anticipate and shape public health and health systems in the digital era.

This action plan will promote digital health systems in the European region as a lever to improve health at a large scale.

aligning investment decisions on digital health with health sector priorities (see Box 3).

The continued use of digital health tools relies on them not being seen as a ‘second best’ temporary solution by either patients or professionals. There has, however, been relatively little evidence on how patients and professionals perceived the use of digital tools during COVID-19 or on their efficacy and cost-effectiveness. Rapid evaluations of current digital health tool use, their benefits and challenges, and the consideration of patient and professional perceptions and preferences are therefore needed to provide an evidence base for what should continue in the future and what adaptations are required, including to help address the “digital divide” so that outcomes are equitable across different populations.

“address the digital divide so that outcomes are equitable across different populations”

Finally, the pandemic has highlighted the ways in which Europe is reliant on third countries and parties for needs which turned out to be strategically essential during the health crisis. This was highlighted by the dependence of European governments on a technological solution for contact tracing determined by GAFAM (big tech companies). Developing and fostering European digital and “technological sovereignty” for Europe, including for digital health, is a term that has been used widely in the past years and, most recently, in December 2021 during the announcement of the priorities of the French Presidency of the EU Council for the first semester. Reaching “European digital health sovereignty” will require the mobilisation of the entire digital health

ecosystem when setting up an ambitious action plan. Key issues that require consideration include whether certain minimum services for public health should be required of vendors within the EU, irrespective of their country of operation, and whether consideration be given to binding requirements for interoperability of systems to prevent dependence on particular vendors.

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ADDRESSING BACKLOGS AND MANAGING WAITING LISTS

DURING AND BEYOND THE COVID-19 PANDEMIC

By: Ewout van Ginneken, Luigi Siciliani, Sarah Reed, Astrid Eriksen, Florian Tille and Tomas Zapata

Summary: Countries are now at a critical juncture. Many health systems are catching up on service backlogs which accumulated throughout the pandemic with different degrees of success. This article identifies the determinants of growing waiting lists, and explores the different policies used to treat COVID-19 patients while also treating non-COVID patients and reducing backlogs. These include improving surge capacity or productivity, centralising coordination and optimising planning, increasing the supply of infrastructure and the health workforce, enhancing digital solutions, assessing payment and incentive systems and redesigning service provision. Some of the strategies are particularly demanding on the workforce, thus policies to support health workers should be implemented in parallel.

Keywords: Care Backlogs, Waiting Lists, Service Provision, Health Financing, COVID-19

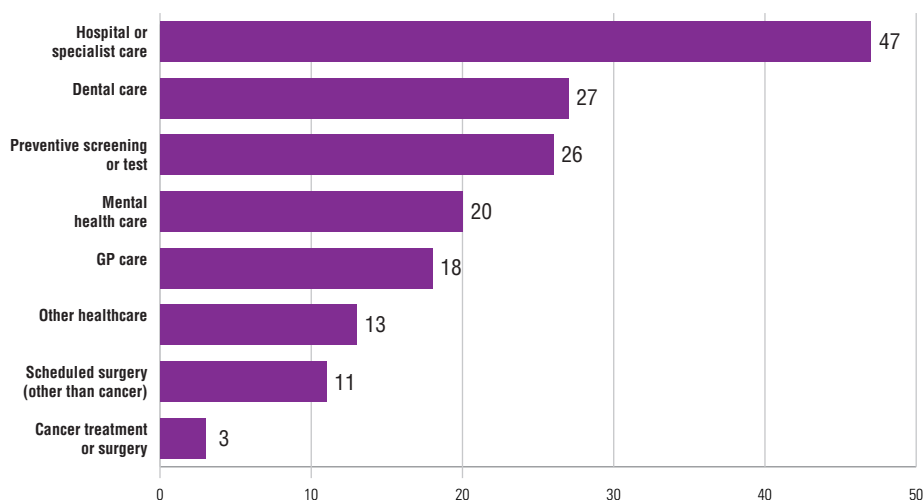
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Introduction

As COVID-19 cases started to rise in early 2020 and hospitalisation rates increased, health systems began to postpone non-emergency (elective) procedures to keep capacity available for COVID-19 patients, and to avoid elective patients being infected. This has subsequently led to longer waiting lists and waiting times in virtually all countries. Issues around staff recruitment and retention, which have been exacerbated by the COVID-19 pandemic, have further aggravated the problem. For patients with

common elective surgeries, such as hip and knee replacements, the backlog for care means that improvements in health and quality of life are postponed. For urgent care, such as missed chemotherapy sessions for cancer care, the delays can have more severe consequences. For other patients, the postponement of specialist appointments may lead to missed referrals for serious ailments.

Each delay in diagnosis and treatment may worsen health problems, prolong recovery and decrease the patients' chances of survival. Countries are now left playing

Figure 1: Unmet need for health care by type of health care, Spring 2021, EU27 (%)Source: ¹

catch-up on these backlogs. There is however great uncertainty regarding the size of the backlogs, how much current and future capacity will be required to address them, and how much provider and workforce capacity will still be needed for COVID-19 patients, which will reduce capacity for non-COVID patients.

The size of backlogs vary across European countries

According to Eurofound data from April 2021, over a fifth (21%) of European Union (EU) citizens have missed a medical examination or treatment during the pandemic. Moreover, 18% reported still having a medical issue for which they could not get treatment, with large variation across countries (from 6% in Denmark to 36% in Hungary). Common types of unmet health care need included hospital or specialist care, dental care, preventive screening or tests, and mental health care (see Figure 1).¹ The World Health Organization's (WHO) first round of the global Pulse survey on the continuity of essential health services during the COVID-19 pandemic, estimated that 92% of a total of 48 countries in the WHO European Region reported some service disruption, and that, on average, 45% of 35 indicative services were disrupted.² A second survey with 22 countries in 2021 indicated lower but still high levels of disruption (82% of countries and 26% of the same indicative services).³

Looking at individual countries, large variation is visible between countries in terms of the size of waiting lists and how far they have come in restoring pre-pandemic levels of elective care, and how waiting times have been affected by the backlog. It should be noted that because data collection is done through various systems and by applying different methodologies, the data below are indicative rather than comparable across countries.

“over a fifth of EU citizens have missed a medical examination or treatment”

In some countries, care activity has been restored to pre-pandemic levels, which helps to prevent the backlog from growing even more, but may not be enough to reduce it. For example, in the Netherlands, the number of hospital surgeries was restored to pre-pandemic levels by July 2021 and increased further throughout the summer period.

However, as a whole, the health system performed 23% fewer surgeries between March 2020 and August 2021 than in the previous year – so there are still an estimated 170,000–210,000 procedures that needs to be made up.⁴ In Sweden, there are signs of recovery as the number of patients in outpatient surgery in June 2021 was higher than the averages for 2017–2019 in the same month.⁵ However, at the same time, waiting times have increased sharply since January 2021. Patients waiting for a medical assessment increased by 30% between January and August 2021, and patients waiting for surgery increased by 27% in the same period.⁶ In Finland, activity levels in primary, dental, and specialised care have been restored to pre-pandemic levels.^{7, 8} Yet, like Sweden, some patients are still waiting for care, especially for dental and specialised care, due to the accumulated backlog.

Other countries, that entered the pandemic with already relatively long waits have seen wait times increase further. For example, in Ireland, the proportion of patients waiting a year or more for inpatient care grew from 14.5% in February 2020 to 25% in September 2021. In outpatient care, 39% of patients waited for a year or more in September 2021, which is only slightly higher than levels in February 2021 (31%).⁹ Similarly in England, the number of routine GP referrals fell by 17% between Feb 2020 and August 2021 while the number of people waiting to start elective treatment grew from 4.4 million in February 2020 to over 5.8 million in September 2021 – nearly a 30% increase.¹⁰ The number of people waiting over 52 weeks for treatment has also grown significantly since the start of the pandemic, reaching a high of 463,127 people in March 2021. Since then, it has decreased to 300,566 in September 2021 equivalent to 5.1% of the patients on the list. Cancer services have also been impacted: between April and June 2020, only 73% of patients started cancer treatment within two months of an urgent GP referral, which is 27% lower than same period in the previous year.¹¹ By September 2021 performance has declined further, with a third of patients waiting longer than two months to start cancer treatment following an urgent referral.

In some countries, the true size of care backlogs is still unknown due to lags in the number of referrals, diagnostics, and screening. For instance, in France, the number of surgical removals of cancers decreased by 6.2% and acute treatment for ischemic heart disease fell by 7.8% in 2020 compared to 2019. Furthermore, although cancer screening was disrupted it increased to above pre-pandemic levels by September 2020. Still, overall, mammograms and colorectal cancer screening decreased by 14.5% and 11.8% respectively between 2019 and 2020. Although national data on waiting times are missing, this suggests that at least for some areas of care, a backlog is building up.¹²

The above rates suggest that simply restoring care to pre-pandemic levels will not be enough to overcome the backlogs, because these levels of activity only address new demand for health care. In the Netherlands, for example, it is estimated that 11–14% more medical procedures would have to be carried out above those in a “normal” year to compensate for the postponed care due to COVID-19.¹³

Drivers of waiting times during and following COVID-19 relate to demand and supply imbalances

Waiting lists and waiting times are a dynamic phenomenon. The waiting list grows if the number of patients being added to the waiting list overcomes the number of patients treated.¹⁴ The COVID-19 pandemic put a halt to the number of patients being treated thus generating larger excess demand and a greater mismatch between demand for and supply of health care services.

There are numerous factors driving the increased backlog and affecting the ability of health systems to respond to the mismatch between demand and supply.

Several factors relate to **supply constraints**: some countries were already struggling with proportionally low numbers per population of doctors, nurses, hospital staff, available hospital beds or low productivity before the pandemic started. COVID-19 has exposed these gaps and may have worsened some through staff exhaustion and burnout

and people leaving the profession. For example, in England, 44% of health care professionals reported feeling unwell due to work-related stress over the previous year, a 9% increase from 2019.¹⁵ Likewise in Spain, an April 2020 survey of health care professionals found that over half of respondents reported symptoms of anxiety (59%) and/or post-traumatic stress disorder (57%), and just under half (46%) experienced depression.¹⁶ Low numbers of health workers and harder working conditions makes it difficult to boost the supply of health services. In contrast, a country with relatively high capacity in terms of hospital beds and health workforce, both in the public and private domain, may be better able to deal with the backlog.

Following the subsequent waves of COVID-19, the cost of treating patients in a safe (COVID free) environment has gone up, due for example to tighter hygiene protocols during surgery. This implies that the same amount of resources now generate lower levels of supply. And this is in addition to the lower supply due to some of the capacity being absorbed to treat COVID-19 patients.

Moreover, countries have changed their **payment systems** to cover COVID-19 related care and prevent providers from going bankrupt. This may have influenced the size of their backlog and waiting times, and how fast these can be restored. For example, the prioritisation of COVID-19 care with special fees and Diagnosis-related groups (DRGs) payment systems, or a switch from activity-based payments to fixed budgets to keep providers solvent, can weaken incentives to provide backlog care. Furthermore, the way countries have introduced new payments to increase the use of digital consultations, could have mitigated the size of backlogs, even though this can only be applied in specific settings (e.g. some primary care, and routine consultations in secondary care).

Other factors affect the backlog on the **demand side**. Relative to pre-COVID times, fewer patients may have been seeking health care due to fear of infection. The backlog could have been even higher without such reductions. However, this is not necessarily good news, as not seeking care at all will

translate for many patients into unmet need. People who have a serious condition may not be diagnosed or treated, with potentially life-threatening consequences. Alternatively, as health systems start to resume their regular activities, this pent-up demand may be observed but with a delay, and those patients in the meantime may have a worse health condition with higher levels of need.

“ simply restoring care to pre-pandemic levels will not be enough

Furthermore, the **health status of the population** may have changed. Before the pandemic, ageing and rising multimorbidity were often mentioned as factors increasing service demand and thus waiting times. COVID-19 is also affecting population health, but the future impact is still largely unknown. According to provisional estimates, life expectancy fell in most EU countries due to COVID-19, with the largest decreases from 2019 to 2020 in Spain (-1.6 years), Bulgaria (-1.5), as well as Lithuania, Poland and Romania (all -1.4).¹⁷ Furthermore, in the longer term, post COVID-19 conditions (so called “long Covid”), estimated to occur in 10–20% of cases, will pose a challenge that requires a multidisciplinary approach to assessment and management,¹⁸ which will undoubtedly create an additional demand for new services and further impact on waiting times. One area where countries experienced backlogs and long waiting times even pre-covid is for mental health services.¹⁹ Imbalances between the need of health services and the limited supply have been exacerbated during covid due to higher need from health workers, key workers and the general population affected by lockdowns.²⁰

Lastly, **new medical technologies**, which affect supply and demand, can also affect waiting times. Examples include the new digital solutions that may help in mitigating backlog. But also new

COVID-19 therapies, like the vaccines, have created (and may create) a new demand (e.g. the booster) that may crowd out provision of other services because health workers were redeployed.

Countries have used a range of policies to tackle their backlogs

Arguably the most effective strategy to reduce the backlog has been and will remain a country's ability to contain the COVID-19 pandemic, as this allows the health system to resume provision of care for non-COVID patients earlier. That being said, health systems have introduced different strategies to increase their capacity to provide essential health services while managing surges of COVID-19 patients (also see Table 1).

In the short- to mid-term, several responses have been aimed at **improving surge capacity or productivity**, with some countries extending the hours of care and paying staff overtime (Australia, Canada, Croatia, Finland, Germany, Ireland, Sweden), purchasing private capacity (e.g. Denmark, Ireland, Sweden, the UK) or paying private providers / temporary staff to use unused facilities to get more capacity (Ireland, Sweden). There are, however, limits to these strategies, as the health workforce is already overstretched, and in some countries, it is the same doctors or nurses working in the public and private sector. Furthermore, the overwhelming majority of countries are relying on personnel that normally perform vaccinations in their countries to also administer the COVID-19 jabs, primarily physicians, although some countries have used other professionals and even lay vaccinators to perform the jabs, keeping physicians and nurses available for usual care²¹ (see also the article by Williams et al. in this issue on creating surge capacity and rethinking skill mix).

Furthermore, countries have implemented more **centralised coordination and optimised planning of care**, including centralised management of waiting lists often using new information systems (Canada, Denmark, Netherlands, Ireland) and optimising surgical scheduling (e.g. investing in on-demand beds in France),

or sharing capacity / reallocating patients through hospital or regional collaboration (Denmark, Finland, Netherlands, Sweden).

To minimise the total health costs for patients from waiting, countries can enhance waiting time prioritisation policies, allowing for more urgent patients to wait less at the expense of longer waits for less urgent patients,²² as was for example evident in the use of physician-drafted priority lists in the Netherlands. There is a risk, however, that some patients will be systematically deprioritised and their turn on the list will never arrive. Another policy option is for countries to introduce policies that reduce inappropriate referrals,²² to ensure that patients on the list have positive or non-marginal benefits. If not done successfully, containing referrals may however increase inequalities in access if patients with higher socioeconomic status are better able to express their needs and thus obtain a referral.

“curbing the spread of coronavirus infection remains the best backlog reduction policy”

In addition, in Spring 2020 several hundred European COVID-19 patients have been treated in another Member State. Most transfers have taken place from the French Department of Grand Est, Northern Italy and the Netherlands to Austria, Germany, Luxembourg and Switzerland (see the article by Wismar et al. in this issue on cross-border care). The transfers were a measure of last resort aimed to relieve countries and regions on the brink of collapse due to capacity shortages.²³

Furthermore, countries have **introduced new payments** to cover COVID-19 related costs, including new fees for out- and inpatient services but also new per diem

and DRG (Diagnosis-related group) tariffs for hospitals. To prevent providers from going bankrupt in those countries where payment is based on activity, a return to budgets occurred in many places.²⁴ These policies, if retained, could reduce incentives to boost supply for elective patients, and therefore these need to be carefully assessed.

The use of **digital solutions** in the delivery of health services has increased during the COVID-19 pandemic, often supported by new fee-for-service (FFS) payments, which may have slowed down the growth of backlogs. Several countries have introduced digital first models (e.g. the UK, Canada, Belgium, Denmark, France, Finland, Ireland, Italy, Netherlands). For example, the Netherlands saw an increase in digital consultations for medical specialist and GPs. In Estonia, remote consultations were covered and added to the benefits basket in July 2020. In Sweden, there has been an increase in digital contacts, especially in primary care, and an increase in care providers offering remote consultations by expanding their digital platforms (see also the article by Williams et al. in this issue on supporting digital health). There are however limitations to digital solutions, as it applies to only a subset of care where an in person visit or treatment is not necessary or essential (e.g. surgeries). More also needs to be understood about how the shift to digital infrastructure differentially impacts patients to avoid inadvertently widening inequalities.

In considering more mid-to long-term efforts, countries have been working to **increase the supply of their infrastructure and health workforce**, such as enhancing bed capacity by funding more critical care and acute beds (France, Ireland, Italy and Portugal), investing in new diagnostic equipment (e.g. Canada, France, Italy), increasing recruitment, often by providing better work conditions/perks and pay bonuses (e.g. in Ireland, Sweden, Finland, France, Germany) and increasing training of health and care workers (e.g. Luxembourg, the UK). Lastly, several EU countries have put in concrete plans for the EU Resiliency Programmes to make significant investments in their digital

Table 1: Strategies and policies to reduce backlog

Strategy	Policy examples
Improving surge capacity or productivity	<ul style="list-style-type: none"> • Extending the hours of care and paying staff overtime • Purchasing private capacity • Paying private providers/temporary staff to use unused facilities to increase capacity • Using other professionals and even lay vaccinators to vaccinate to keep physicians and nurses available for usual care
Centralising coordination and optimising planning	<ul style="list-style-type: none"> • Centralising management of waiting lists • Optimising surgical scheduling • Enhancing waiting time prioritisation policies • Carefully introducing policies that reduce inappropriate referrals • Sharing capacity/reallocating patients through hospital or regional collaboration • Treating patients in another country where capacity has not been exceeded
Increasing the supply of infrastructure and health workforce	<ul style="list-style-type: none"> • Enhancing bed capacity by funding more critical care and acute beds • Investing in new diagnostic equipment • Increasing recruitment and retention by providing better work conditions and perks • Investing in digital infrastructure
Enhancing digital solutions	<ul style="list-style-type: none"> • Introducing of digital first models • Including remote consultations in the benefits basket
Assessing payment and incentive systems	<ul style="list-style-type: none"> • Carefully balancing between incentives for providing COVID-19 related care and incentives for providing backlog care • Introducing payment to facilitate remote consultations and bonuses for staff
Redesigning service provision	<ul style="list-style-type: none"> • Improving coordination between primary and secondary care to contain demand and reduce the waiting list • Developing primary and community care alternatives to acute care • Investing in community health teams and pathways, shifting more staff into community and primary care • Expanding the use of advance nurse practitioners • Expanding home-based services

Source: Authors

infrastructure. COVID-19 has exposed the limits of reduced capacity for some health systems, and this may be the time for some countries to make a case for increased funding for the health sector.

Other, more long-term strategies have focused on **redesigning service provision** and using the pandemic as a catalyst for sometimes already existing health reform plans. In fact, several recent policies pre-pandemic have aimed at improving coordination between primary and secondary care to contain demand and reduce the waiting list.²⁹ This includes developing primary and community care alternatives to acute care. For instance, investing in community health teams and pathways, shifting more staff into community and primary care (e.g. Finland, France, Italy, Ireland, Portugal), expanding

the use of advance nurse practitioners (e.g. France, Ireland), and expanding home – based services (e.g. France, Italy, the UK).

Conclusion

Countries have been affected by care backlogs due to COVID-19 to various degrees. A great deal of uncertainty remains as to how much capacity will be needed to care for COVID-19 patients and how much will be available to dedicate to reducing the backlog. Indeed, backlogs and waiting lists are dynamic and therefore flexible policies need to be implemented that increase health service supply flows, rather than one-off increases in supply, and that can absorb unexpected changes in supply and demand.

Moving forward, curbing the spread of coronavirus infection remains the best backlog reduction policy as it allows for health professionals to focus on providing care for non-COVID patients. Some of the strategies being used are particularly demanding on the workforce. Thus in many countries, having a large enough health workforce will remain a main bottleneck for years to come. This puts increasing pressure on health workers making them at increased risk of absenteeism, mental health problems and possible burnout, all of which are increasingly seen across Europe. Therefore, policies to support health workers should be implemented in parallel to backlog reduction policies (see the article by Williams et al. in this issue on supporting the health workforce) as their well-being is a long-term concern.

There may also be some room to adjust payment systems so that addressing the care backlog can be prioritised and incentivised, although this will be challenging given current workloads and workforce constraints. Furthermore, countries could look at policies that further rationalise the supply of health services and demand of health care, although if this is not done carefully, it could increase inequalities in utilisation and health. On a more positive note, there seems to be a real opportunity for countries to make a strong case for reforms that address the longstanding gaps and inefficiencies in the health system, including gaps in funding in some countries.

The authors gratefully acknowledge inputs from Madelon Kroneman (Netherlands Institute of Health Services Research, the Netherlands), Liina-Kaisa Tynkkynen and Marjaana Viita-aho (Tampere University, Finland) and Johan Frisk (Swedish Agency for Health and Care Services Analysis).

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HAVE WE LEARNT THE RIGHT LESSONS? **INTENSIVE CARE CAPACITIES DURING THE COVID-19 PANDEMIC** IN EUROPE

By: **Juliane Winkelmann**, **Dimitra Panteli**, **Elke Berger** and **Reinhard Busse**

Summary: Intensive care capacity proved critical during the COVID-19 pandemic with many countries observing shortages of beds, medical equipment, and specialised health professionals. Strategies to surge capacities ranged from postponement of elective treatments, creation of temporary hospitals and tapping resources from private hospitals. National and international hospital networks and transfer of critically ill patients proved important as did telemedical solutions and international training programmes to maintain best levels of intensive care. Stronger coordination at EU level to allocate patients and staff across borders might facilitate better management of high demand on ICU wards.

Keywords: *Intensive Care Capacity, ICU Beds, Hospitals, Physical Infrastructure, COVID-19*

Introduction

Hospitals and intensive care capacities have arguably received more attention from policymakers and the general public during the COVID-19 pandemic than ever before. In many European Union (EU) countries, intensive care wards were heavily stretched, not only in terms of physical infrastructure such as beds and medical equipment (e.g. ventilators), but much more in terms of having specialised health professionals available that could keep these beds operable. Many countries reported a shortage of intensive care capacities for patients with COVID-19,

especially during the early stages of the pandemic, but also during subsequent waves.

This article describes how countries in the EU created surge capacity of intensive care beds and managed intensive care unit (ICU) capacity to ensure access to critical care, not only for COVID-19 cases but for all other patients in need of this kind of care. It identifies which structural adaptations countries retained from their experiences during the first wave of COVID-19 and highlights any room for improvement with regards to enhanced cross-border coordination of intensive care capacities.

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Box 1: Cross-border networks supported coordination of critically ill COVID-19 patients

Pandemic task forces in cross-border regions played an important role in the monitoring of ICU capacities to ensure the distribution of COVID-19 patients according to need and capacities of local hospitals, for example:

- *The Pandemic Euregio Meuse-Rhine Incident Control and Crisis Management (PANDEMERIC) project* was created in 2020, emanating from an existing INTERREG project, to achieve a better exchange of information and coordination in the distribution of ICU patients between Belgium, Germany and the Netherlands.
- *The long-standing cooperation in the health sector in the Upper-Rhine area*, between Germany, France, Switzerland, enabled close coordination in transferring critically ill COVID-19 patients. The expert network for the cross-border exchange of information on infectious diseases and health reporting mandated by the German-French-Swiss Upper Rhine Conference (EPI-RHIN), with representatives of local and regional public health units, reported incidence rates and new occupancy rates of intensive care beds due to COVID-19 in the subregions on a weekly basis.¹
- *The transborder hospital of Cerdanya* undertook a coordinating role in transferring patients requiring intensive care to the closest referral hospitals in France and Spain. For example, Spanish patients in critical condition were received in intensive care wards in France.²

Countries had to increase intensive care surge capacity quickly

At the outset of the COVID-19 pandemic in March 2020, the rapidly rising number of patients with COVID-19 requiring acute and intensive care created an extraordinary overload and demand on hospitals, especially ICUs, across the EU. All countries therefore prepared and implemented plans to create surge capacities to ensure sufficient physical infrastructure and to mobilise the health workforce at the start of the COVID-19 pandemic.

The most common strategy to free up significant numbers of beds and staff in intensive care wards was the postponement of elective treatments and surgeries. This enabled hospitals to reallocate critical care beds that usually accommodate post-operative patients from major surgery to the care of patients with COVID-19. Most countries reallocated resources from other units (such as post-surgery recovery units and neonatal ICUs) and adapted surgical beds with monitoring equipment, oxygen equipment and ventilators.

Moreover, countries designated specific hospitals to transform wards to treat COVID-19 cases, in particular in Eastern Europe.³ In Croatia, for example, specific hospitals and wards were designated as COVID-19 facilities during the first wave. In many countries with an important private hospital sector such as Greece, Ireland, Italy and Spain, governments requested private hospitals to make their ICU beds available. In the Italian region of Lombardy, ICU beds in private hospitals represented about 30% of total ICU surge capacity and in Spain 15% of these capacities were used during the first wave. In some countries, such as France, Hungary, Romania, Slovenia and Spain temporary field hospitals were set up either by the army or with support from local authorities or non-governmental organisations to create more ICU beds.^{1 2 3 4} Greece and Italy were also able to utilise ICU beds provided by military hospitals.⁵

The initial availability of intensive care beds varied across EU countries

To understand how countries responded to the COVID-19 crisis and the rapidly rising numbers of COVID-19 patients requiring intensive care, the initial starting point of ICU bed capacity is important to consider, although the definition of ICU beds is often different from one country to another. Prior to the outbreak, ICU bed capacity varied widely across countries, ranging from 4 to 5 ICU beds per 100,000 in Finland, Greece, Malta and Sweden up to 29 in Austria and 33 in Germany.^{2 3}

In anticipation of a rise in demand for care, many countries managed to rapidly increase the number of ICU beds. Malta, for example, increased the number of ICU beds five-fold from 20 to over 100 beds, with ICU beds from different wards also converted into ICU beds for COVID-19 patients which were used at the peak of the second wave in March 2021.² Countries with an initial low capacity of ICU beds, such as Greece, Ireland, Netherlands and Sweden doubled their ICU bed capacities to respond to rapidly rising patient numbers during the first wave.⁴ France, which had more ICU beds per population than many other EU countries to begin with, also managed to double the number of ICU beds with ventilators that allowed them to accommodate the most severely ill patients until April 2020 from 5,400 to 10,700 ICU beds.²

Countries moved patients across regions and borders to ensure appropriate management of ICU capacities

To alleviate pressure from particularly strained intensive care wards, critically ill patients were transferred from the hardest-hit regions to areas with spare capacity within or across countries. In the Netherlands, up to 100 patients per day were transferred across regions within the country at the end of March 2020. This was coordinated by the army that used ambulances, mobile ICUs, a special ICU bus and two helicopters to ensure safe patient transfers. The Netherlands also transferred 55 intensive care patients to Germany and included the use of ICU beds in Germany in preparation plans for the second wave. In-country transfer of

ICU COVID-19 patients also took place in many other countries such as Belgium, Denmark, France, Germany, Greece, Portugal and Sweden.¹ During the first wave in France, patients from Paris, the regions Grand Est, Bourgogne-Franche Comté and Corse were transferred by medically equipped TGVs (France's intercity high-speed rail service) or boat/plane to less-overwhelmed north-western and south-western regions. Between March 22 and April 5, 2020, 160 patients were transferred from France to neighbouring countries of the Grand-Est Region or other European countries.

Hospital networks proved important from the beginning of the pandemic

Hospital networks, both within countries and across borders, were important in the management of acute care and ICU surge capacity. In Lombardy, Italy, the ICU network that initially contained 15 hospitals in February 2020 quickly expanded to 72 facilities in the following weeks, creating in total 482 new ICU beds within the first two weeks of March 2020.² Similarly in Estonia, the existing hospital network which links smaller hospitals with the large North Estonia Medical Centre and Tartu University Hospital proved crucial in creating the necessary ICU surge capacity to meet population needs.³ Cross-border cooperation between health providers and authorities that existed before the pandemic supported the exchange of information and patients (see Box 1).

With experiences accumulated during the first wave, countries developed planning tools for more adaptive ICU surge capacity

During the summer of 2020, with decreasing numbers of COVID-19 patients in most countries, many hospitals scaled back the number of ICU beds designated for COVID-19 patients. Increasing experience and understanding on length of stay, treatment options and resource use of COVID-19 patients, also enabled policymakers and hospital planners to apply more flexible and adaptive approaches to respond to COVID-19 cases. In subsequent COVID-19 waves, countries used the incidence as a benchmark to free

up acute and intensive care capacities in more affected regions. Bulgaria and Belgium, for example, developed plans in which less affected areas had to reserve fewer COVID-19 ICU beds. In Bulgarian districts with an incidence rate between 60 and 119.9 cases per 100,000 inhabitants, hospitals had to reserve 5% of bed capacity for COVID-19 patients, while 10% of beds had to be reserved in areas with incidence rates above 120 cases per 100,000 inhabitants as of October 2020.⁴

“apply more flexible and adaptive approaches

Throughout the first and then subsequent waves, many countries set up monitoring systems and central coordinating mechanisms to assess the number of free ICU beds at different levels and to steer COVID-19 patients requiring intensive care across the country. During the second wave in Slovenia, a special coordinator was appointed to manage hospital capacity and provide real-time data. In the Netherlands, the National Coordination Centre for Distribution of Patients took on a steering role in June 2020 to allocate COVID-19 patients among Dutch hospitals. In Germany, a central coordination mechanism was developed by the federal and regional governments in collaboration with intensive care physicians to distribute COVID-19 patients in ICU care across the country (see Box 2).

As a result of the increase in ICU beds during the first wave of the pandemic, a reserve of additional beds and ICU equipment existed in many countries, which was available to create or designate beds for COVID-19 patients in subsequent waves as needs increased. This allowed for more flexible planning of hospital resources. In many countries, such as Austria, Belgium, France, Slovakia and Sweden, ICU bed capacity dedicated to COVID-19 patients increased according to the numbers of COVID-19 patients

Box 2: A cross-regional coordination mechanism in Germany aimed to prevent ICUs from collapsing

In late 2020, a coordination mechanism was developed to transfer COVID-19 patients requiring intensive care from regions heavily affected by the pandemic, and with scarce acute and intensive care capacities, to less severely affected regions. The concept is based on a cross-cluster takeover (“Kleeblattkonzept” – literally translated as clover leaf concept) and divides Germany into five regions.

In the event of insufficient acute and ICU capacities in one hospital, patients are transferred to facilities within the same region. If capacities are exceeded within this region, a cross-cluster takeover of patients across regions takes place. All five regions are centrally coordinated at a single point of contact which is tasked with coordination and is in regular communication with the state governments. This mechanism was applied for the transfer of COVID-19 patients at the peaks of the second wave (December 2020) and fourth wave (November and December 2021), with patients being transported by helicopter, plane or ambulance.

Source: ⁵ ⁶

hospitalised; thus the number of ICU beds and COVID-19 ICU beds evolved depending on the pandemic waves. Austria, for example, was able to increase ICU capacity by 10–20% on average, but up to 50% where capacity was severely needed during the second wave.²

The example of Denmark shows a health system's capacity to adapt and plan throughout the pandemic. In the first wave, Danish regions were asked to reserve around half the national acute and ICU surge capacity for COVID-19 patients. In the second wave, existing ICU surge capacities were considered sufficient, but

Box 3: Telemedical solutions in critical care were scaled up during the pandemic

Established in 2017, the project *Enhanced Recovery in Intensive Care* (ERIC) aimed at strengthening the adherence and use of quality indicators to avoid long-term consequences such as Post Intensive Care Syndrome (PICS) and to optimise the patient's rehabilitation potential. This telehealth programme involved delivering structured, daily, telemedical cart-based rounds to critically ill patients as well as offering a 24/7 on-call service with Charité operating as a hub. While initially providing virtual intensive care in hospitals in the Berlin-Brandenburg area in Germany, ERIC has been scaled up rapidly within the SaveBerlin@COVID-19 network to include all Berlin hospitals that treat COVID-19 patients. Shortly after, ERIC's telemedical robots were deployed to other parts of Germany to support hospitals in heavily affected regions. Moreover, intensive care specialists within the ERIC project continued to provide telemedical counselling to hospitals in Uzbekistan and South Africa throughout the COVID-19 pandemic.

In another example, *the Cyber-Physical System for Telemedicine and Intensive Care* (CPS4TIC) was successfully using telemedicine during the first wave for intensive care treatment of COVID-19 patients. CPS4TIC supports the transformation of existing as well as newly created intensive care structures to operate as a hub with a central ICU and connected ICUs in peripheral hospitals. The system comprises a telemedical cockpit as well as telemedical consoles at each connected hospital, a connector platform and bedside hubs with robotic arm altogether enabling telemedicine, continuous real-time monitoring and a bedside smart care environment. The EU-funded large-scale pilot aims at deploying eight ICU hubs across Europe and at developing a template to establish ICU hubs, which are rapidly scalable. The project brings together 19 partners from six European countries (Austria, Germany, Greece, Luxembourg, the Netherlands, Portugal) and aims at ensuring sufficient diagnosis and treatment of patients with COVID-19 while at the same time reducing the risk of infection. It was successfully implemented during the first wave of the pandemic.¹²

acute bed surge capacity was increased by 50%. Moreover, hospitals cooperated more closely during the second wave compared to the first wave.²

The number of trained health care staff was a more limiting factor than the number of ICU beds

In many European countries, the capacity constraints in ICU wards for the care of COVID-19 patients was caused by staff shortages and insufficient skill mix rather than bed shortages. In Belgium, the Czech Republic and Germany, for example, the increase in ICU beds proved difficult to manage as there was a lack of nurses with ICU expertise and the ICU workforce already faced a high workload. In the Czech Republic, the limited availability of staff posed a substantial threat to care provision in early 2021, although this varied largely across regions. Several

measures were deployed to mitigate the shortage of nurses such as the supervision of nurses by those with ICU expertise, ICU training, or cancellation of minimum staffing levels such as in Germany (see the article by Williams et al. in this issue on creating surge capacity and rethinking skill mix).

To support countries in strengthening their skills in intensive care, the EU started an intensive care medicine training programme on basic prerequisites, together with the European Society of Intensive Care Medicine (ESICM), for doctors and nurses who do not usually work in intensive care.¹⁰ The rapid training, available in all EU languages, has trained about 16,000 doctors and nurses within 660 hospitals across the EU and the United Kingdom. Moreover, the EU Civil Protection Mechanism supports Member States by coordinating assistance

to countries requesting EU support: in May 2021, Belgium and Denmark sent medical staff to Slovakia to help treat COVID-19 patients and in October 2021 several countries provided assistance, including medical teams and equipment, to Romania and Latvia.¹¹

Some European countries, such as Denmark or Germany, also implemented and upscaled telemedical solutions to counteract the lack of specialised staff. A European pilot network for intensive care treatment of COVID-19 patients was created during the first wave connecting 19 partners from six countries (see Box 3).

Key lesson: Work towards better communication and coordination of ICU capacities with cross-border assistance

With the rising numbers of COVID-19 cases in autumn 2021 in many EU countries, ICU wards were again facing tremendous strain in terms of staff as well as treatment capacities for other patients. In October and November 2021, Romania transferred COVID-19 patients to other countries (i.e. Austria, Hungary and Poland) and some heavily affected countries (e.g. Latvia) received assistance through the EU Civil Protection Mechanism. This solidarity mechanism which also deploys Medical Corps to countries has proved to be an important tool in providing assistance to Member States and countries with strained capacities outside the EU. Similarly, the transfer of COVID-19 patients across borders has been shown to be an important tool and symbol of European solidarity with the potential to be expanded.

Stronger coordination mechanisms at EU level as well as within border regions that allocate patients and staff across borders could be one important option. Although a transfer of COVID-19 patients requiring intensive care is clearly one of the last resorts when hospitals are at their limits of capacity, a more coordinated response in health care and providing cross-border assistance is needed. A main prerequisite for the effective monitoring of intensive care capacities and the appropriate transfer of patients and medical staff

across borders is the close monitoring and reporting of hospital occupancy rates, which requires a harmonised definition of ICU beds; this is currently still lacking.¹³ Common regulatory mechanisms to document and recognise specialisations of health professionals, such as intensive or emergency care, or rapid training set up during the pandemic should be implemented across the EU. This would allow for better reporting on staff availability and hence more professional mobility to rapidly expand the workforce with the appropriate skills in times of urgent need.¹⁴

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Use of digital health tools in Europe: before, during and after COVID-19

By: N Fahy, GA Williams, COVID-19 Health System Response Monitor Network

Copenhagen: World Health Organization 2021 (acting as the host organization for, and secretariat of, the European Observatory on Health Systems and Policies)

Observatory Policy Brief 42

Number of pages: 30; **ISSN:** 1997-8073

Freely available for download: <https://eurohealthobservatory.who.int/>

Digital health tools hold the potential to improve the efficiency, accessibility and quality of care, but widespread adoption in Europe had been slow prior to the COVID-19 crisis. Many digital health tools nevertheless moved from being viewed as a potential opportunity to becoming an immediate necessity during the pandemic, and their use increased substantially. This forthcoming policy brief takes stock of how digital health tools have been used in Europe during the COVID-19 pandemic, in

order to review what has happened, assess how uptake and use of these tools has been facilitated, identify issues that are emerging, and learn lessons for the longer term to support the sustained use of digital health tools in the future.

The authors show that digital health tools have been used to support four main areas during the pandemic: communication and information, including tackling misinformation; surveillance and monitoring; the continuing provision of health care such as through remote consultations; and the rollout and monitoring of

vaccination programmes. Policy changes to regulation and reimbursement, investment in technical infrastructure, and training for health professionals has been needed to facilitate utilization. The authors conclude by arguing that greater strategic investment is needed longer term to support developments in digital health, targeting both the development of infrastructure within the health setting and outside (e.g. internet provision), and research and development to ensure that technologies continue to evolve.



EUROPEAN UNION SUPPORT FOR HEALTH SYSTEMS IN THE PANDEMIC AND BEYOND

By: Nicole Mauer, Dimitra Panteli, Nick Fahy and Isabel De La Mata

Summary: There are a wide range of European Union (EU) instruments available to support Member States. Maximising their impact for health systems typically requires combining multiple tools with different objectives. The COVID-19 pandemic hit Europe in the transition to a new set of multiannual financial perspectives, creating the opportunity to secure additional resources for health systems over the coming years. The European Commission has also devised multiple new instruments to expand the scope of existing tools for the pandemic response and beyond. Optimising the use of and the synergies between tools will be crucial to strengthen the resilience of health systems.

Keywords: EU Support, Health Systems Strengthening, Resilience, COVID-19 Response

Introduction

The European Union (EU) puts various instruments at the disposal of Member States, which can support the strengthening and improvement of health systems. Even though health is not among the primary objectives for many of these tools, the support on offer is wide-ranging. It spans across many policy areas with implications for health and health systems, such as research and innovation, economic, social and regional policy.

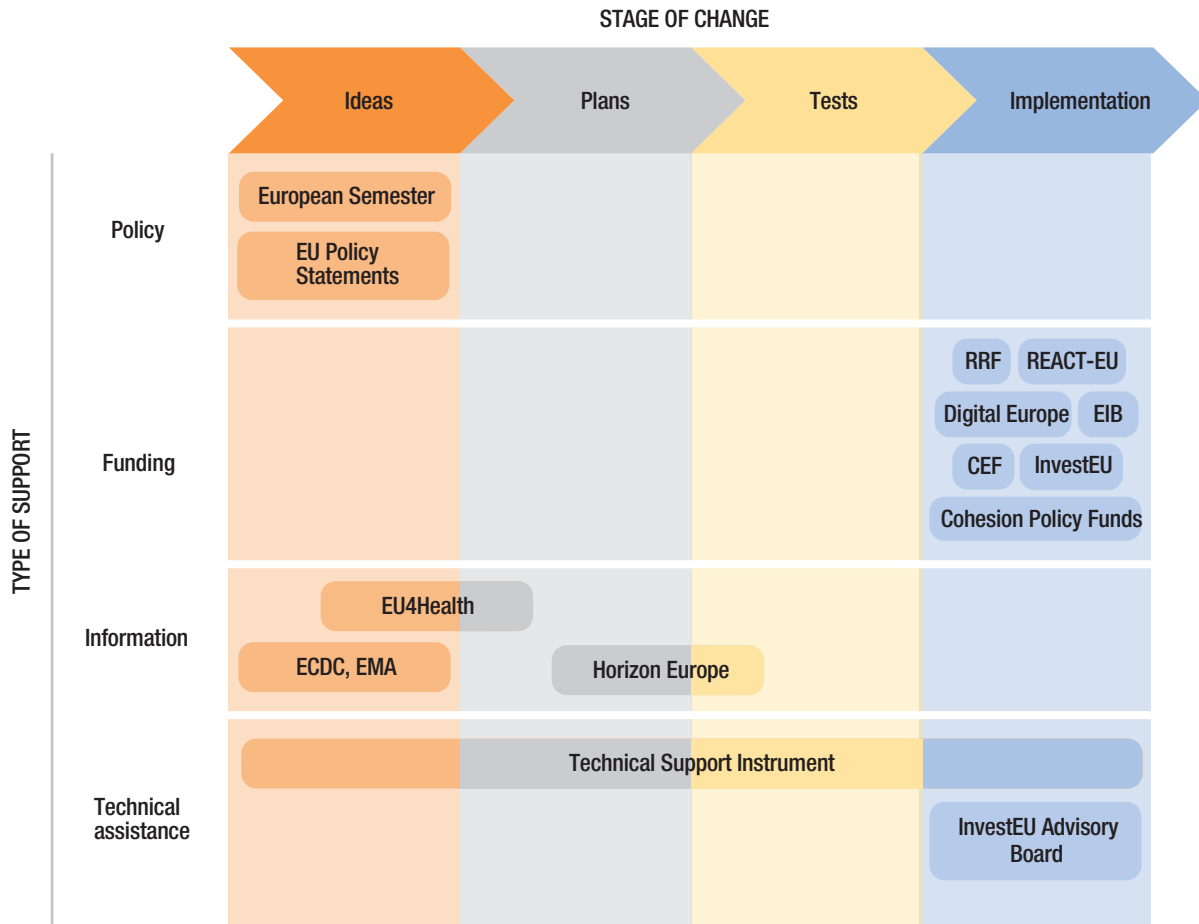
Relevant instruments include, among others, policy mechanisms such as the European Semester for setting reform priorities. Others may supply information and evidence such as the research projects under Horizon Europe, funding for health care infrastructure under the Cohesion Policy Funds or technical assistance for developing national strategies through the Technical Support Instrument (a detailed

overview of relevant EU instruments can be found in the Policy Brief “European support for improving health and care systems”).¹

There is also the potential to combine EU tools with support from other sources, such as national and regional instruments or international bodies like the World Health Organization (WHO). However, the broad variety of tools and their potential to support different stages in the process of implementing change within a system (see **Figure 1**) also creates the challenge for policymakers of identifying and combining various instruments with different objectives. Effectively managing multiple support tools and creating synergies between them can maximise their impact on health systems.

In **Figure 1**, the selected EU instruments are classified by the main type of support provided (far left column) and the stage of

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Figure 1: Overview of different EU instruments along the stages of the change process

Source:

the change process for which they are most useful to Member States (top row). Note that this representation is not exhaustive and that most instruments can provide multiple types of support across one or more stages of change. The process of change is the series of successive steps from the formulation of a policy idea to the development of concrete plans for realising it, which is sometimes followed by a piloting stage and finally culminates in large-scale implementation.

How and when are EU tools shaped?

European tools function in accordance with the political and financial cycles of EU institutions, which repeat in five- and seven-year intervals, respectively. While this creates specific windows of opportunity for shaping the ways in which instruments can be used and their priorities, there is typically limited

flexibility for reallocating funds and realigning objectives throughout an ongoing cycle. The most favourable time for shaping the instruments is between cycles, when more long-term political objectives are set and the Multiannual Financial Framework (MFF), dictating the allocation of funds to the various EU programmes, is defined. Within every seven-year MFF, funds for various EU instruments and programmes are disbursed on a yearly basis in accordance with a pre-specified budget and plan for implementation. Nevertheless, the degree of receptiveness for new aims and initiatives is limited until the mid-term review of programmes takes place half-way through an ongoing MFF and is at its highest during the planning and transition stages leading up to a new cycle.

The COVID-19 pandemic hit Europe part-way through a political cycle and

in a financial transition period, with the new MFF due to start in 2021. There were two major consequences for health systems at EU level. Firstly, this timing presented a unique opportunity to channel resources towards health systems and to weave health objectives into new tools like the Recovery and Resilience Facility, while also facilitating a revision of many existing EU instruments, such as the Health Programme (now named EU4Health) in view of the upcoming MFF and the need to address health system challenges uncovered or exacerbated by the pandemic. Secondly, the EU was able to activate and adapt various existing response mechanisms despite initially slow and uncoordinated Member State reactions and the limited scope for redirecting support in the concluding months of the previous MFF (2014–2020).

The role of EU tools in the COVID-19 response

Throughout the pandemic, the European Commission has activated various existing instruments, while also devising new mechanisms to mount an EU-wide response.

As early as January 2020, Member States were urged to start exchanging live updates on national responses and coordinating measures via the Early Warning and Response System, operated by the European Centre for Disease Prevention and Control (ECDC), and used to facilitate the communication between EU countries and the institutions in response to past outbreaks such as SARS, Ebola, and H1N1 Influenza.⁴ Concurrently, the Health Security Committee, dedicated to coordinating national preparedness activities and exchanging best practices between Member States since 2013, started convening in regular intervals to monitor the rapidly evolving epidemiological situation.⁵

“
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The Commission also appointed an Advisory Panel on COVID-19 to provide expert support for the steering of response measures and the formulation of recommendations and guidance at EU and Member State level (e.g. testing strategies, contact tracing, social distancing measures). Despite the prompt activation of these coordination mechanisms, national interests dominated Member States' policies in the early months of the pandemic amid border closures and the concentrated allocation of available resources at domestic level.⁶

Table 1: Use of EU tools during the pandemic

Strategy	Instruments
Cross-country coordination and exchange	<ul style="list-style-type: none"> • Early Warning and Response System • Health Security Committee • COVID-19 Clearing house for medical equipment
(Immediate) emergency response	<ul style="list-style-type: none"> • EU Civil Protection Mechanism, including rescEU • Emergency Support Instrument • Coronavirus Response Investment Initiatives (CRII & CRII Plus) • REACT-EU • Joint Procurement Agreement
Knowledge brokering and research	<ul style="list-style-type: none"> • European Commission's Advisory Panel on COVID-19 • ECDC (situational reports, country mappings, vaccine tracker) • EMA (COVID-19 Task force) • COVID-19 research funded by Horizon 2020 and Horizon Europe
Interoperability and digital health	<ul style="list-style-type: none"> • COVID-19 Mobile tracing and warning applications • EU Digital COVID Vaccination certificate
Investment for recovery and future health adversities	<ul style="list-style-type: none"> • Recovery and Resilience Facility • Cohesion Policy Funds • EU4Health • Horizon Europe

Source: Authors

Nevertheless, the progressive strengthening of other existing EU emergency mechanisms turned the tide in spring 2020, when the EU's Civil Protection Mechanism started distributing personal protective equipment (PPE), medical equipment and deploying health care professionals to areas in need.⁷ A funding mechanism established in 2016 and reactivated in 2020, the Emergency Support Instrument (ESI), which is dedicated to financially assisting Member States with emergency responses, committed €2.7 billion for the immediate pandemic response and recovery. Among others, funding was made available for the training of health care professionals, the transportation of patients across borders, as well as the joint procurement and mobilisation of resources including PPE, medical equipment (supplies, vaccines, tests, emergency aid, therapies) and health care staff.⁸ Member States joined forces at EU level to procure medical countermeasures under the Joint Procurement Agreement, first established in the aftermath of the H1N1 pandemic, and enough vaccine doses for

the entire EU population through Advance Purchase Agreements with funding from the ESI. Most recently, the rescEU stockpile, a European reserve of medical countermeasures and an integral part of the Civil Protection Mechanism, was used to deploy medical equipment to Romania in response to a request for assistance issued in mid-October 2021.⁹

Among the mechanisms introduced to support the immediate pandemic response, the Coronavirus Response Investment Initiative (CRII) and its evolution CRII plus rapidly mobilised financial support for Member States' responses, by redirecting funds from existing funding instruments like the EU Solidarity Fund and the Cohesion Funds (previously known as European Structural and Investment Funds) in the 2014–2020 MFF.¹⁰ Extending these, a new mechanism termed REACT-EU (Recovery Assistance for Cohesion and the Territories of Europe) was introduced, with entirely new funding dedicated to bridging the transition period between the two financial cycles (2014–2020

and 2021–2027). Throughout the second half of 2020, the European Commission set up the COVID-19 Clearing House for medical equipment, which functioned as a communication channel between Member States and suppliers from the industry to ensure the timely and adequate provision of medical equipment.¹⁴ Member States equally wielded digital tools to counter the pandemic. In this context, the eHealth Network, connecting the authorities responsible for eHealth across Member States, contributed to the development of interoperable COVID-19 mobile tracing applications and the rapid introduction of the EU's Digital COVID Certificate to certify vaccination within the EU, recognised in many other third countries to date.¹⁵

Various EU agencies, including the ECDC and the European Medicines Agency (EMA), contributed to the EU-wide COVID-19 response in their role as knowledge-brokers (as displayed in **Figure 1**), providing reliable scientific expertise to guide policymakers and driving various other EU level mechanisms including the procurement of medicines and the vaccine rollout. From the early stages of the pandemic, ECDC was monitoring the evolution and spread of disease across Member States, providing publicly accessible data, regularly producing situational reports, guidelines and country mappings, and sharing risk assessments which served as policy guidance to national governments. Since the rollout of COVID-19 vaccines, ECDC has also been tracking and comparing the immunisation progress across countries with its COVID-19 Vaccine Tracker,¹⁶ promoting transparency and providing encouragement for broad vaccination coverage. The EMA established a COVID-19 pandemic task force to accelerate access to therapies and vaccines, which was responsible for coordinating the regulatory steps to develop, authorise and monitor the safety of new medicinal products for the treatment of COVID-19. The task force's efforts have contributed towards promoting the concurrent development and introduction of multiple COVID-19 vaccines on the European market.¹⁷

“securing more flexible funding instruments to boost the recovery

Investment in EU instruments: recovery and preparing for future health shocks

The pandemic has highlighted the importance of establishing more coordinated preparedness and response mechanisms at EU level, alongside securing more flexible funding instruments to boost the recovery of Member States. This has translated into several longer-term actions with potentially important effects on health systems. One of the largest new instruments is the Recovery and Resilience Facility – the centrepiece of the EU's €800 billion response mechanism (“NextGenerationEU”) – which aims to mitigate the economic and social consequences of COVID-19, and provide countries with the financial means to digitalise, modernise and strengthen their health systems (discussed further in the article by Mauer et al. in this issue on a European Health Union).

For tools like the Cohesion Policy Funds, which have long been used to fund new health infrastructure or training for health care workers and were used to support Member States' pandemic responses through the CRII and CRII Plus, the new MFF envisions a faster and more flexible allocation of funds, among several other administrative simplifications, thus increasing their potential utility for health systems strengthening. RescEU, which is part of the EU Civil Protection Mechanism (described above), has received a €2 billion reinforcement over 2021–2027 for the expansion of readily accessible reserves of emergency equipment and medical countermeasures.¹⁸ Furthermore, EU4Health has been boosted from a

budget of €450 million to over €5 billion and features crisis preparedness among its investment priorities.¹⁹

Beyond substantially expanding the budgets and scope of existing tools, the European Commission has issued plans for the strengthening of two existing EU agencies, EMA and ECDC, as well as the establishment of a new authority, the Health Emergency Preparedness and Response Authority (HERA), to oversee the coordination of preparedness activities in the case of future emergencies. The Commission is also proposing a strengthened legal basis at EU level through a Regulation on serious cross-border threats, which would envision setting up an integrated surveillance system and a joint approach in developing, stockpiling and procuring crisis equipment and medicine (discussed further in the article by Mauer et al. in this issue on a European Health Union).

Conclusion

The welfare of European health systems is increasingly interlinked and connected to that of other health systems globally. Complex challenges like climate change, zoonotic diseases, mass migration, demographic and epidemiologic transitions are only some of the shared threats calling for a coordinated and multi-component approach pervading all relevant policy fields in the EU. Beyond reinforcing the European framework for preparedness and response to cross-border threats, a crucial step moving forward will be to optimise the use and complementarity of different EU instruments, as well as to cultivate an EU-level approach to strengthening the various building blocks of health systems within the EU and beyond.

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Health systems resilience during COVID-19: Lessons for building back better

By: A Sagan, E Webb, N Azzopardi-Muscat, I de la Mata, M McKee, J Figueras

Published by: World Health Organization 2021 (acting as the host organization for, and secretariat of, the European Observatory on Health Systems and Policies)

Health Policy Series 56

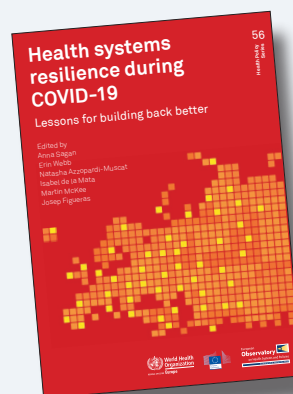
Number of pages: 108; **ISBN:** 978 92 890 5187 3

Freely available for download: <https://tinyurl.com/27na68u2>

The COVID-19 pandemic represents a health system shock of unprecedented scale. Health systems resilience – defined as the ability to absorb, adapt, and transform to cope with shocks – is needed to ensure sustained performance of the health system functions (governance, financing, resource generation, and service delivery) so that the ultimate health system goals, especially that of improving health of the population, can be achieved. As we have witnessed, few countries could achieve this goal and even fewer could do so in a sustained way – leaving all countries with important

lessons to learn. The lessons derived in this study can inform both the ongoing efforts, while countries are still grappling with the pandemic, as well as help ensure these efforts also incorporate a longer-term perspective, thus improving preparedness to any future health system shocks.

This study is targeted at policymakers and has two aims. First, it provides national policymakers with evidence from other countries to assess their own responses to COVID-19 and incorporate adjustments that are appropriate for their national contexts. To this end the study offers examples of assessment



areas for each of the identified strategies that can be used as the first step in national assessments of health systems resilience.

Second, the findings and lessons contained in the study enable us to draw experience from the COVID-19 pandemic to begin “building back better” to improve the response to future health systems shocks and hopefully even pre-empt them.

This supports the transition from managing the crisis to achieving more resilient health systems and societies.

CROSSING THE BORDER FOR HEALTH CARE: ADDING VALUE FOR PATIENTS AND HEALTH SYSTEMS

By: Matthias Wismar, Robert Touret, Jonathan Clottes, Gabrielle Dubois, Apolline Damez-Fontaine, Vincent Rouvet and Ewout van Ginneken

Summary: In the European Union, patients are able to receive health care in another Member State. This has made life much easier for people travelling, working, studying, and residing abroad and provided options for patients facing long waiting times at home or suffering from rare diseases. These opportunities have been especially important during the COVID-19 pandemic, which has led to increased demand for COVID-19 care as well as catch-up care following the disruption to routine health services. As we are progressing towards a European Health Union, we suggest where improvements to cross-border health care could be made.

Keywords: Cross-Border Care, Border Regions, Bilateral Agreements, COVID-19

Introduction

Cross-border health care adds substantial value for European patients and citizens. It has been gradually developed since the beginning of the European Economic Community to ensure free movement in the European labour market. Cross-border health care rests on various legal frameworks. The two most important legal frameworks are: 1) the **regulation** on the coordination of social security systems (European Commission Regulation 883/2004); and 2) the patients' rights **directive** (Directive 2011/24/EU) (**see Box 1**). Cross-border care received an important impetus when Directive 2011/24 on the application of patients' rights in cross border health care passed in 2011 (**Table 1** distinguishes between the regulation and the directive), though further progress towards implementation in practice and user-friendliness is necessary.

Cross-border health care helps European patients who fall sick abroad, increases options to receive planned care in another European Union (EU) country, can help patients with rare diseases, and provides opportunities to develop cross-border collaboration between providers and payers. It also has the capacity to help alleviate health system pressures in times of crisis.

Learning from experiences during the COVID-19 crisis, Europe is moving towards the creation of a European Health Union, in which EU countries work more closely together to protect the health of Europeans and to collectively respond to cross-border health crises (see the article by Mauer et al. in this issue on a European Health Union). In this context, cross-border health care must not be forgotten and warrants further attention.

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Box 1: The legal framework for cross-border health care in the EU: general principles for better access to care

The **regulation** on the coordination of social security systems (European Commission Regulation 883/2004) provides the legal framework for unplanned care and planned care organised by the competent authority (i.e. those with the power to perform the designated function, such as a sickness fund or national government). The coordination of social security systems was introduced to facilitate cross-border mobility for workers, which is a precondition for a European labour market. Therefore, the predecessor or the regulation on the coordination of social security systems, Regulation of the Council Number 3 on social security of cross-border workers, came into force almost in parallel with the creation of the European Economic Community. The regulation has been reformed several times and renamed but retained its function in guaranteeing cross-border social security.

The patients' rights **directive** (Directive 2011/24/EU) is more recent and establishes the right to seek health care in another Member State. It was passed after a long political process in 2011 with an implementation period of three years. It codifies a series of landmark rulings from the European Court of Justice (CJEU) on cross-border health care. The case law focused on demands of European citizens that the free movement of services also applies to health services and goods and therefore they derived from this an entitlement to access cross-border health care.¹ In a series of rulings, the CJEU followed these demands with the exception of 'hospital care', or what is now called 'planned care' allowing pre-authorisation through competent authorities.²

Beyond codifying case law, the patient's rights directive is of particular importance to the development of cross-border health care as it stipulates provisions with regards to 'cooperation in health care'. The topics addressed are instrumental to the improvement and accessibility of cross-border health care for patients, e.g. assistance and cooperation, recognition of a prescription issued in another Member State, the European Reference Networks (ERNs), action in the area of rare diseases, eHealth, and cooperation on Health Technology Assessment (HTA).

There is a host of other hard- and soft-law instruments surrounding the regulation and the directive. Their purpose is to specify, implement or explain the legal frameworks.

The number of patients using cross-border health care is currently small

Overall, the number of patients using cross-border health care under both legal frameworks – the regulation and the directive – appear small and the budgetary impacts are very limited.

It is estimated that unplanned health care under the **regulation** amounts to around 2 million patients per year. **Figure 1** provides an overview on the budgetary impact of cross-border health care under the regulation, which amounts to 0.4% of the total health care budget in the EU. For planned health care, the most prominent flows took place from France to Belgium, from Luxembourg to Germany, from Germany to Austria, from Germany to

Switzerland, from Austria to Germany, from Luxembourg to Belgium, and from Belgium to Luxembourg.³ The number of patients using cross-border health care under the regulation is difficult to assess and clear trends cannot be identified. There are many reasons for inaccuracies. There are severe data gaps⁴ and some Member States do not make a distinction between planned care under the regulation and the directive. Moreover, some of the bilateral agreements for cross-border health care do not routinely report their data.

The numbers of patients using the directive for cross-border health care and the costs reimbursed by the competent authorities is much smaller. In 2019, 290,890 cases

were reported up from 232,054 in 2018. The growth occurred predominantly in cross-border care not requiring prior authorisation. These numbers are not directly comparable because of variations in the number of countries reporting each year. The total expenditure on all reimbursements reported by the Member States also rose in 2019 to €92 million up from €73.3 million in 2018.⁵ The impact of the directive on national health budgets appears marginal estimated at only 0.004% of the EU-wide annual health care budget.⁶ However, as mentioned above, the data are incomplete.

How does the cross-border European care framework benefit EU citizens?

It covers European patients who fall sick abroad

EU nationals, who are crossing the border to live, work, study or retire can rely on the European Health Insurance Card (EHIC) when falling sick. It allows anyone who has health coverage in their country of origin to receive medical treatment in another Member State for free or at a reduced cost if that treatment becomes necessary during their visit abroad. Pre-existing chronic conditions which require care, such as kidney dialysis, are also covered. Students who study in another country can also use the EHIC for health care. Posted workers, who are sent by their employers for up to 24 months to another EU Member State can use the EHIC to obtain health care in the country of work, though their employer needs to request a form prior to the posting as a statement of the applicable legislation. The same is applicable for workers, who work in more than one country. Frontier workers, that commute on a daily or weekly basis to another Member State may choose between health care in their country of residence or country of work. This right is retained at retirement and extended to their families and their survivors.

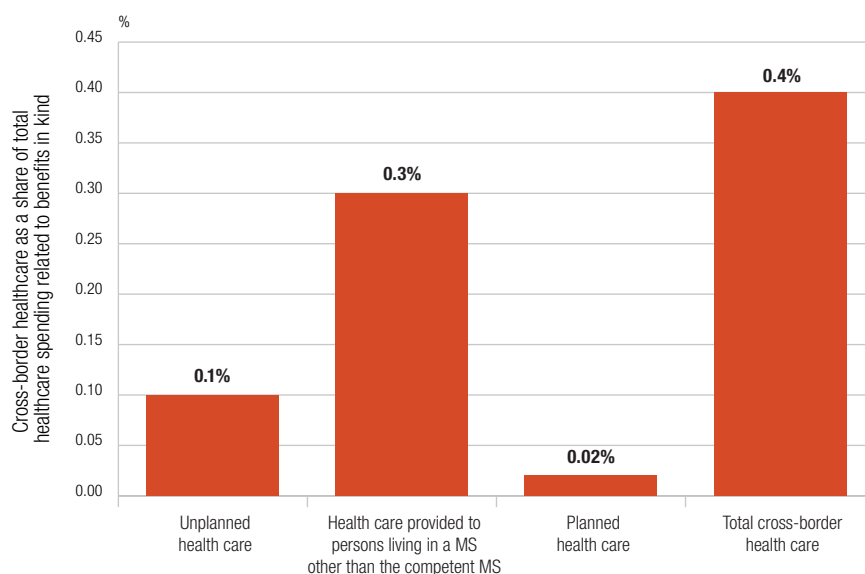
It increases the option to receive planned care abroad

EU nationals can also ask for access to cross-border health care for planned procedures. This is particularly attractive when long waiting lists exist in the country of residence or if the health care facility may be closer to the place of

Table 1: Cross-border health care legal frameworks in comparison

	Regulation on the coordination of social security	Directive on patients' rights in cross-border health care
Countries included	EEA and Switzerland	EU Member States, Iceland, Norway and Liechtenstein
Patients covered	EU nationals, stateless people and refugees who reside in the territory of a Member State	Insured persons
Sectors covered	Public health care	Private and public health care
Services covered	Unplanned necessary care and planned care organised through the competent authority	Planned and unplanned/necessary care initiated through the patient
Expenditure covered	Competent authority covers the expenditure incurred; travel expenses are not covered	Reimbursement of health care costs according to national tariffs in country of affiliation; travel expenses are not covered

Note: After the United Kingdom's withdrawal from the EU, British citizens can continue to use their EHIC card until expiry date or they can apply for the Global Health Insurance Card which covers unplanned but not planned care in the countries covered by the regulation; Norway, Iceland and Liechtenstein joined the legal framework in 2015.

Figure 1: Budgetary impact of cross-border health care under the regulation, by type, 2019

Source: ²

Note: No data is available on prior authorised care from countries with prior-authorisation procedures from Germany. No data is available on health care not requiring prior authorisation from Germany, Hungary, Luxembourg, the Netherlands.

residence. There is, however, always a requirement to seek prior approval under the regulation. But once authorisation has been granted, all financial aspects are taken care of by the competent authority, be it a sickness fund or a health authority. In case of undue delay, e.g. if care cannot be provided within a medical justifiable time, the pre-authorisation requirement is not applicable.

EU nationals can seek cross-border health care on their own initiative under the directive. They are free to choose a provider across the border for a planned

procedure. Some Member States, however, require pre-authorisation for the obtained care subject to specific conditions. In contrast to the previously mentioned process, the patient needs to pay in advance and can only claim reimbursement upon completion of the procedure.

It can help patients with rare diseases who cannot access treatment at home

Cross-border health care under the directive also provides substantial benefits for patients living with rare diseases at the European level. There are more than 6000

rare diseases, which affect 30 million European Union citizens.⁵ While a number of countries have strategies or plans to address rare disease, the scarcity of cases and knowledge in this area makes a European approach necessary and cross-border cooperation is needed to promote better, faster and more accurate diagnosis. According to a survey conducted by Eurordis, which covered 8 rare diseases, 25% of patients waited from five to 30 years for a correct diagnosis, and during that time 41% received a misdiagnosis.⁶ To help patients with rare diseases, the directive of 2011 led to the creation of 24 European Reference Networks (ERNs), including 900 highly specialized units from over 300 hospitals in 26 EU countries.⁷ Through the pooling of medical expert knowledge, the ERNs provide common expertise thus offering patients potential benefits in terms of early diagnosis and improved treatment. Meanwhile, The Rare 2030 (Eurordis) foresight study, initiated by the European Parliament and supported by the European Commission, emphasises the importance of European cross-border cooperation and innovation in this area and will help guide a reflection on rare disease policy in Europe over the next decade.⁸

Bilateral agreements have been developed to allow for cross-border collaboration across Member States and regions

A mapping exercise commissioned by the European Commission in 2016/2017 ⁹ identified 1,167 projects of which 423 projects were listed, showcasing a great

Box 2: The bi-national Hospital de Cerdanya/Hôpital de Cerdagne

The AECT-HC/GECT-HC is a cross border hospital, situated in the Est Pyrenees. Its very name (AECT/GECT stands for European Grouping of Territorial Cooperation) speaks of its vocation as a bi-national instrument, devised to facilitate access to specialised medical care for a local population of around 33,000 (although this greatly increases during peak tourist seasons) inhabiting 50 municipalities on a 1340 km² territory.

The founding partners of the AECT-HC/GECT-HC are the public health care systems of France and Catalonia, Spain. The EU contributed 60% of the building costs through FEDER funds; CatSalut and ARS-Occitanie shared the rest, and funded 100% of the equipment. The facility is managed jointly by both health care systems with a yearly operating budget of €20 million.

The project for a bi-national, shared hospital that is pivotal to a future cross-border health care network, was long in the making. It originated in 2005 with a declaration of intent signed by the French and Catalan authorities, and in 2007 the EGCT was registered. The need for a new hospital was particularly important for the local French population whose main reference hospital was in Perpignan, which was difficult to access through mountain roads or by the helicopter emergency medical service.

Since its opening in September 2014, the centre offers access to 11 medical and surgical specialties to the local population and tourists in a small but modern local hospital that is well equipped. Through strategic alliances with sister organisations, in Catalonia and Occitanie, a further 15 specialities, comprising facilities for haemodialysis and (soon to be available) for chemotherapy treatments have also been made available.

variety in European collaboration in health care, social care and public health. These collaborations can provide concrete advantages for EU citizens. The projects not only address patient mobility but also target workforce mobility, sharing of knowledge and infrastructure, emergencies, and joint investment in medical infrastructure.

The findings show that most activity takes place in central and western Europe between countries, particularly those with similar welfare traditions (e.g. Scandinavian countries), or a shared history (e.g. Italy and Slovenia or Italy and Austria). Furthermore, cross border collaborations can be aimed at overcoming gaps in regional provision, which occurs, for example, in the cross-border bi-national hospital of Cerdanya in the Pyrenees (see Box 2).

This type of bilateral cooperation can take the form of cross-border framework agreements and conventions, as is the case

for France. In France, those agreements are intended to provide a legal framework for the establishment of local cross-border health or medico-social cooperation agreements. The aim is to promote the development of cooperation in health or medico-social care between France and bordering countries and to ensure better access to quality care in border regions by:

- guaranteeing continuity of care and faster recourse to emergency assistance
- optimising the organisation of the health care offer and by encouraging the sharing of capacities (material and human resources)
- encouraging the sharing of knowledge, practices, and human and material resources (see Box 3).

These cross-border framework agreements are intended to complement the measures already provided for by Regulations 883/2004 and 987/2009, and by Directive 2011/24 EU on cross-border care. An example is TRISAN,

a tri-national competence centre for cross-border collaboration between Germany, France and Switzerland in the Upper Rhine Region. TRISAN conducts studies, provides information, connects stakeholders for best-practice exchanges, and supports the cross-border cooperation project.^[10]

Several Member States have bilateral cross-border agreements for planned health care in place. They help to overcome temporary capacity shortages and the long waiting lists resulting from it. According to a study on the Franco-Belgian ZOAST-initiative (*Zones Organisées d'Accès aux Soins Transfrontaliers*), the largest share of inpatient interventions provided were gastroplasty for the treatment of obesity, stent placement, treatment of diaphragmatic hernia or hiatal hernia, therapeutic ureteroscopy, hip replacement, pacemaker, knee prosthesis, polysomnography, treatment of bilateral inguinal, femoral or obturator hernia and cholecystectomy. For outpatient and ambulatory care, the most common interventions involved ophthalmological operations, mainly for cataract.

Can cross-border health care help COVID-19 patients and alleviate pressure on health systems?

The COVID-19 pandemic has put great stress on EU Member States' health systems, in some cases leading to situations in which acute beds, intensive care unit (ICU) beds and workforce were not sufficient to meet the surge in demand for COVID-19-related care. During the first wave of the pandemic in the spring of 2020, within a two month period, almost 300 European COVID-19 patients were treated in another Member State. Most transfers took place from the French Region of Grand Est, Northern Italy and the Netherlands to Austria, Germany, Luxembourg and Switzerland (see the article by Winkelmann et al. in this issue). These transfers were a measure of last resort aimed to help countries and regions on the brink of collapse due to capacity shortages.^[11] Even though some of these initiatives were organised outside the European frameworks, they nevertheless serve as a reminder of the

Box 3: The case of Franco-German cross-border cooperation before and during the COVID-19 crisis

France has several cross-border framework agreements that allow, at the regional level, the directors of the Regional Health Agencies (*Agences Régionales de santé, ARS*) to sign local health cooperation agreements in order to promote patient care and the mobility of health professionals in border regions.

ARS Grand-Est has four framework agreements for health cooperation between France and Belgium, Luxembourg, Switzerland and Germany.

The Franco-German cross-border health cooperation framework agreement,^{*} covers the border area of the former regions Alsace and Lorraine regions of the Grand-Est on the one hand, and the German Länders (States) of Baden-Württemberg, Rhineland-Palatinate and Saarland on the other. It aims to ensure better access to care for the populations of the border region, to guarantee continuity of care and faster access to emergency assistance, to optimise the supply of care and promote the sharing of professional knowledge and practices, and to facilitate crisis management.

Further conventions have also been added in specific areas. For example, the field of cross-border emergency medical assistance, is the subject of several conventions between the ARS Grand-Est, the health structures concerned, the SAMU (*Service d'Aide Médicale Urgente*; Emergency medical service) and fire departments and the neighbouring Länder.[†] These specific conventions allow the emergency call centre responsible for the region to call on the emergency resources of the neighbouring region to shorten the response time or to compensate for the temporary unavailability of means.[‡]

* Signed in 2005 and entered into force in April 2007.

† Between Alsace and Rhineland-Palatinate as well as between Alsace and Baden-Württemberg both on 10 February 2009.

When the COVID-19 crisis began, cross-border cooperation led the ARS Grand-Est and the Prefecture to reinforce their cooperation and to innovate actions on areas including contact tracing and the exchange of practices. Indeed, the Grand-Est region was very strongly affected at the beginning of the crisis in March 2020. Thanks to the solidarity provided by neighbouring countries, including Germany, transfers of patients in intensive care units were organised. Thus, between 22 March and 5 April 2020, 160 patients were transferred from France to neighbouring countries of the Grand-Est Region (Belgium, Luxembourg, Germany, Switzerland) or other EU countries (Austria), of which 74% of which were transferred to Germany.[‡]

In the same spirit, France has offered to receive patients in intensive care if the health situation so requires.

Furthermore, in order to consolidate cross-border cooperation in light of the lessons learned from the COVID-19 crisis, ARS Grand-Est has proposed to develop a joint cross-border observatory on health data for the border areas[§] in order to facilitate a harmonised exchange between the parties.

On the Franco-German border, with regard to the prospects offered by the Treaty of Aix,[¶] this common desire to work on strengthening health cooperation would apply particularly to the cross-border living areas that are institutionally embodied by the Eurodistricts.

‡ Data from the ARS Grand-Est.

§ Bassins de vie frontaliers.

¶ Treaty between the French Republic and the Federal Republic of Germany on Franco-German cooperation and integration, signed on 22 January 2019 and entered into force on 22 January 2020.

potential of cross-border care in crisis situations. Countries could explore the European frameworks better to facilitate the continued demand for COVID-19-related services as well as new demand for backlog care (see the article by van Ginneken et al.).

Furthermore, several countries have been working together, with assistance from the EU and its frameworks, in providing emergency care for COVID-19 patients in the Interreg regions. For example, the Euregio Meuse-Rhine confronted with the pandemic set up a trilateral crisis management centre (Task Force Corona)^{*}. Furthermore, the cross-border

* The Euregio fosters regional cross-border collaboration on all economic, social, and cultural aspects. It was created in 1976, with judicial status achieved in 1991.

Cerdanya Hospital between France and Spain cooperates with French hospitals to share intensive care capacity and personnel, working with the border police to ensure access for patients and health professionals.[‡]

What needs to be done to reap the full potential of cross-border care?

Cross-border health care adds value for patients in many circumstances. At present, there is limited utilisation of cross-border care and the budgetary impact is negligible. The European Commission is carrying out an evaluation of the cross-border health care directive to assess its effects (see Box 4). However,

there are pending issues that need to be addressed for cross-border health care to be realised in its full potential:

- **EHIC needs improvement:** In 2019, there were close to 250 million EHIC cards issued amounting only to 53.1% of insured persons in the EU. The EHIC has also faced some acceptance problems with health care providers.[‡]
- **Better information for patients and health professionals:** Patients and health professionals are not always informed on the options for cross-border health care, even in border regions.[‡] The expansion of cross-border digital services for both patients and professionals will be important.

Box 4: Evaluation of the patients' right directive

The European Commission is carrying out an evaluation of the cross-border health care directive to assess how the rules are working (or not working) in the interests of patients.¹⁴ It will focus, in particular, on patients access to safe and high-quality health care in another country and how it encourages cooperation between national health care providers, also on rare diseases and ERNs. Following an extensive consultation of stakeholders across the EU including national and regional authorities, health professionals, health insurers, patient organisations and citizens, its report is expected to be published in the Spring of 2022.

- **End financial risk for patients:** In many countries, the directive is implemented in a way that discourages patients to use it; in particular, it does not contain information on tariffs and levels of reimbursement. Patients therefore often prefer to use cross-border health care under the regulation.
- **Improve continuity of care:** Cross-border hand-over and continuity of care remains a difficult task. In general, electronic patient records or paper records do not travel with the patient or is inadequately acknowledged.¹⁵ The EU eHealth network has created the MyHealth@EU infrastructure to facilitate the transfer of medical records and by 2025 all EU countries are expected to be connected.
- **Improve user-friendliness:** The legal provisions are complicated and deter potential patients from using cross-border health care.
- **Strengthening the ERNs:** The ERNs had a promising start. With the expansion of the networks and the uptake of more patients with rare disease in the virtual panel consultations the question of additional investment in infrastructure and expertise needs to be answered.

- **Strengthening the evidence base and monitoring of bilateral agreements:** information on the prevalence and analysis on the effectiveness of bilateral agreements and a continuous monitoring would help to provide a stronger evidence base.

- **Better integrate and support the possibility of having bilateral agreements within the European framework:** Similar to the agreements between France and some of its border countries, the measures provided are already complimented by the regulation and the directive mentioned above, while addressing local issues.

Conclusion

Cross-border health care adds value for patients and helps to provide timely access to high quality health care. This may be especially important during the COVID-19 pandemic which has led to increased demand for COVID-19 care as well as catch-up care following the disruption to routine health services. If we are to strive towards a European Health Union, we should continue to invest in cross-border health care by improving the user-friendliness, providing help for cross-border collaboration, strengthening the ERNs, and further expanding the cooperation of cross-border regions, Member States, and at European level.

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TOWARDS A EUROPEAN HEALTH UNION: NEW INSTRUMENTS FOR STRONGER AND MORE RESILIENT HEALTH SYSTEMS

By: Nicole Mauer, Dimitra Panteli, Dorli Kahr-Gottlieb and Isabel De La Mata

Summary: The pandemic has underlined that many of today's challenges to health systems are shared, prompting the European Commission to put forward proposals for a stronger European Health Union. While the primary objective is to strengthen the European Union's health security framework in response to cross-border threats, this is accompanied by a renewed and wider political commitment to improve European health systems and invest in their sustainability and resilience. This momentum has started to take shape in the instruments under the new Multiannual Financial Framework and raises questions on how EU health action may unfold and evolve in the coming years.

Keywords: *European Health Union, Preparedness and Response, Health Security Framework, Health Systems, COVID-19*

Introduction

Since the inception of the European project, the planning and delivery of health care has primarily been a Member State competence. In recent years, diverse cross-border challenges, including rising antimicrobial resistance and new infectious threats like COVID-19, have started to impact on the capacity of national governments to respond, jeopardising the provision of health care in Europe. While the ongoing COVID-19 pandemic is not the first shared challenge, it is the most devastating to date, with a death toll of over one million in Europe alone.¹ In the early stages of the pandemic, governments' responses were

often uncoordinated and marked by a wave of border closures and supply chain challenges. Among shortages of medical countermeasures and the exhaustion of hospitals and intensive care units, most European Union (EU) Member States reverted to nationwide lockdowns over several weeks and months. The resulting social and economic devastation has underscored the collective need for better monitoring, testing and contact tracing capacities, as well as more flexible, stable, and rapid supplies of medicines and protective equipment.

Although European solidarity and cooperation has been progressively reinstated, the pandemic has brought

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attention to the shortcomings of existing preparedness and response frameworks at both national and EU levels. While the sovereignty of Member States and the principle of subsidiarity as anchored in article 168 of the Treaty on the Functioning of the European Union (TFEU)⁹ remain uncontested, the pandemic has underlined that many of today's challenges to health systems can no longer be overcome by national states alone and adds to calls for a stronger role of the EU in health.

A European Health Union on preparedness and response?

Six months into the pandemic, on occasion of her yearly State of the Union address, the President of the European Commission, Ursula von der Leyen, called for the creation of a European Health Union with a focus on expanding the Union's preparedness and response capacities.¹⁰ The commitment to strengthening EU mechanisms to better protect citizens in the event of future health adversities took shape in the European Commission's Communication on "Building a European Health Union" in November 2020.¹¹ This document delineates a first proposed action plan envisioning a better coordination of preparedness and response mechanisms at EU level.

The Communication draws on the lessons learnt from the EU's pandemic response, putting forward four main proposals in line with current EU treaty provisions (see Box 1). These include a new Regulation on serious cross-border health threats, upgrading the current legal provisions made under Decision 1082/2013/EU,¹² the expansion of mandates for two of the EU's existing agencies (the European Medicines Agency, EMA and the European Centre for Disease Prevention and Control, ECDC) and finally, the creation of a new Health Emergency Preparedness and Response authority (HERA). These are discussed in the corresponding sections, below.

A series of consultations were held in late 2020 and the first half of 2021 to gather public and stakeholder feedback on the European Health Union proposals.

Box 1: Commission Communication on Building a European Health Union

Commission Communication on "Building a European Health Union: Reinforcing the EU's resilience for cross-border health threats"¹¹ proposes to:

- Adopt a Regulation on serious cross-border threats to health, repealing and upgrading Decision 1082/2013/EU
- Extend the mandate of the European Medicines Agency (EMA)
- Extend the mandate of the European Centre for Disease Prevention and Control (ECDC)
- Establish a new Health Emergency Preparedness and Response Authority (HERA).

This was followed by the initiation of negotiations with the European Parliament and the Council. On 28 October 2021, the Council and European Parliament reached a political agreement on a new mandate for the EMA, with its formal adoption expected by the end of February 2022.¹³ This was closely followed by a political agreement on a second Health Union pillar, the broadening of the ECDC's mandate, on 29 November 2021.¹⁴ Negotiations to find a consensus on the Regulation on serious cross-border threats to health are still ongoing.

Civil society actions welcoming the Commission's efforts to strengthen EU action on health have started to emerge in parallel. The proposals are wide ranging,

with some praising a strengthened health security framework and calling for the development of a common Global Health policy, over ten years after the EU's Global Health strategy was first defined and last updated.¹⁵ Others like the European Health Union initiative go one step further, proposing a juridical basis for the EU to protect and secure European citizens' health, which may require the revision of European treaties to enhance EU legal competence on health policy.¹⁶ While supporting the proposals of the European Commission to create mechanisms for concerted action on cross-border health threats and better prepare for the next pandemic, the initiative's Manifesto (see Box 2) advocates for an ambitious longer-term vision beyond a European

Box 2: Manifesto of the European Health Union initiative¹⁰

The Manifesto, which has received more than 1,270 signatures to date, is a document endorsed by experts and relevant organisations calling on the political leaders of Europe to commit to creating a European Health Union, which should not be exclusively framed as a response to the pandemic. The Manifesto points to some of the weaknesses within existing mechanisms for collaboration between Member States and with the European institutions and sets out a vision of a European Union, which protects the lives and health of all. Its main goals are to:

- Strive for health and wellbeing of all Europeans, with no one left behind;
- Strengthen solidarity within and among Member States with particular attention to the needs of disadvantaged populations;
- Ensure environmental sustainability by adopting the European Green Deal;
- Provide security for all Europeans, protecting them from major threats to health;
- Enable everyone's voice to be heard, so that policies affecting their health are created with them and not for them.

Health Union framed as a reaction to the shocks of COVID-19, placing a strong emphasis on the rights of individual states to shape such a union. Accordingly, it envisages a European Health Union which champions national, European, and global solidarity, strives for the promotion of healthy living and working standards, as well as wellbeing and equality, and fashions people-centred policies that prevent disease and protect health for all.

“many challenges to health systems can no longer be overcome by national states alone”

Building a solid European Health Security Framework

Decision 1082/2013/EU is the EU’s current legal framework for serious cross-border threats. Among other things, it forms the basis for Joint Procurement Agreements for medical countermeasures, which have allowed Member States to procure medicines, personal protective and medical equipment in past outbreaks and the current pandemic.¹¹ Within the scope of Decision 1082, Member States are required to present their preparedness and response plans for review by the European Commission in 3-year intervals. However, at the start of the pandemic, many of the national plans were inadequate and poorly updated, leaving Member States grappling with overwhelmed health systems, while also highlighting gaps within the Decision framework and the lack of legal instruments at the disposal of the Commission to ensure Member State compliance. It was the deficiencies unveiled by the pandemic that spurred plans for a new Regulation, which foresees a stronger and more comprehensive legal framework for the Union to prepare and respond to serious cross border threats and

public health emergencies. This includes strengthened preparedness planning at EU level, rules for a flexible and more integrated EU-level surveillance system, increased capacity of the EU and its Member States for risk assessments and targeted action. Finally, the proposal envisions the development of a binding EU pandemic preparedness plan, allowing the Commission to recognise and declare a future health emergency at EU level and thereby trigger the adoption of common measures and specific response mechanisms. The proposed Regulation supports actions eligible for funding under the EU4Health programme (described in further detail below). Its legal basis, TFEU Article 168,¹² and focus on biological, chemical, environmental, and unknown threats, remain unchanged.

Strengthening EU agencies: EMA and ECDC

As part of the Commission’s proposals for a mandate expansion, the EMA will oversee the coordination of clinical trials and studies on vaccine safety and effectiveness within the EU, as well as the issuance of scientific advice on pharmaceuticals. Its role will also extend to monitoring and mitigating medicine shortages in the future.¹³

During the ongoing COVID-19 pandemic, the ECDC has been hampered by lack of access to data and a limited capacity to respond adequately to large-scale disease outbreaks. To remedy this, the mandate of ECDC will be extended to monitor Member States’ health systems capacity and assess preparedness gaps, to develop and review frameworks for preparedness plans, as well as to establish an improved Early Warning and Response System and monitor the level of vaccination coverage against major communicable diseases across Member States. Among its newly gained responsibilities are also the issuance of concrete recommendations to coordinate Member States’ responses, the establishment of a reference laboratory network for crisis-relevant advice on new pathogens and an EU Health Task Force to assist Member States in response to outbreaks of communicable diseases.¹⁴

Creating a new authority to coordinate preparedness and response mechanisms

The Health Emergency Preparedness and Response Authority (HERA) is planned to fulfil a broad set of tasks to facilitate the coordination of preparedness and response mechanisms at EU level. Specifically, its functions will range from identifying promising new medicines and technologies, to supporting their development and expanding EU manufacturing capacity. It will address supply chain weaknesses and ensure raw material availability. In order to rapidly activate response mechanisms, it will continuously monitor emerging biomedical issues (e.g., new or re-emerging pathogens), as well as coordinate emergency procurement and the rapid deployment of medical countermeasures. Finally, it will complement the Commission’s current efforts to establish medical reserves through the RescEU stockpile, an integral part of the European Civil Protection Mechanism, and ensure EU-wide access to such reserves.¹⁵

As part of the HERA package, the Commission submitted a proposal for a Council Regulation on a “framework of measures for ensuring the supply of crisis-relevant medical countermeasures in the event of a public health emergency at Union level” in September 2021.¹⁶ This includes the monitoring, procurement, purchasing and manufacturing of crisis relevant medical countermeasures, as well as the activation of flexible manufacturing facilities and emergency research and innovation plans. The proposal also envisions establishing an inventory for crisis-relevant medical countermeasure production facilities and the facilitation of emergency funding. A political agreement was reached in December 2021.¹⁷

Beyond pandemic preparedness: Strengthening health systems in the European Union

The new Multiannual Financial Framework (MFF), which determines the allocation of EU funds to the various EU programmes and projects over a seven-year financial period, was launched earlier this year and is heavily influenced by the consequences of the pandemic. It has

reserved substantial sums for the economic and social recovery of Member States through the Recovery and Resilience Facility (RRF) and the Cohesion Policy Funds, as well as specifically for health through the new €5 billion Health Programme (EU4Health), the Research Programme (Horizon Europe) and the EU's existing emergency response mechanisms, such as RescEU for medical stockpiling.

Strengthening resilience and building a European Health Union have become a priority

The heightened consensus for joint health action at EU level has also pervaded areas other than pandemic preparedness and response, with the European Commission currently in the midst of implementing an ambitious plan to fight cancer, the €4 billion Europe's Beating Cancer Plan (actions funded through the EU4Health, Horizon Europe and Digital Europe programmes), and concrete plans for the modernisation of the EU's pharmaceutical framework to enhance the resilience of medicine provisions and markets in Europe, as well as to better address unmet therapeutic needs for patients.¹³

These and other actions are receiving funding from EU4Health, which focuses on four main priorities. Beyond crisis preparedness, it will concentrate on disease prevention, health systems and the healthcare workforce, and digital health, with a transversal focus on cancer.¹³ The EU4Health 2021 work programme supports a wide range of actions of relevance for national health systems along each of these priorities: from grants to strengthen infectious disease

Box 3: Recovery and Resilience Facility: Potential for Strengthening Health Systems

Several Member States have decided to prioritise health systems in their National Recovery and Resilience Plans,¹⁴ with some pledging several billion euros to fund initiatives, for example, in the areas of:

- **Primary Health Care and Prevention**

- Austria: €100 million reserved for its Primary Health Care Reform with a focus on building new primary care units and enhancing the digital and environmental sustainability of existing infrastructure.
- Greece: €254 million to improve Universal Health Coverage and set up national screening programmes, as well as promote psychosocial care integration and strengthen palliative care.

- **Digital Transition, Hospitals and Infrastructure**

- France: €2.5 billion reserved for renovating hospitals and health care facilities, modernising existing infrastructure and equipment.
- Germany: €3 billion pledged to modernise hospitals and invest in digital infrastructures including telemedicine, robotics, IT and cybersecurity.
- Italy: €15.6 billion to invest in new technologies for hospitals, telemedicine for home health care services and territorial medicine.

surveillance capacities and mitigate medicine shortages to the prevention of non-communicable diseases, including actions dedicated to mental health, primary care and the promotion of healthy lifestyles. For cancer, the programme aims to improve the screening, diagnosis and testing of different types of cancers and to enhance access to human papillomavirus vaccination across Europe.¹⁴

A new executive agency, the Health and Digital Executive agency (HaDEA), has been established to manage and implement EU4Health, as well as health-related actions within Horizon Europe (Cluster 1 on Health), the Connecting Europe Facility's Digital portfolio and a new complementary instrument, the Digital Europe programme. This novel constellation with a substantial budget dedicated to health may contribute towards the targeted identification and investment in transversal health priorities, as well as the effective steering of synergies across the various programmes included in HaDEA's portfolio.¹⁵ For instance, health research with a focus on innovating health systems may be funded through Horizon Europe and be complemented by the development of new digital infrastructure through Digital Europe, which focuses

on innovative technologies such as artificial intelligence, and the digital interoperability mechanisms developed within the scope of the Connecting Europe Facility.

Under the new Recovery and Resilience Facility, Member States are eligible to receive funding for reforms and actions supporting their economic and social recovery, as well as the digitalisation and sustainable development of public administrations including health systems.¹⁶ The funds are closely interlinked with the European Semester and will be used to address some of the reforms suggested in the country-specific recommendations produced by the Commission as part of the yearly cycle. In 2020, all Member States received recommendations for the implementation of health system reforms, with a focus on strengthening the health workforce, securing the supply of critical medical products, improving access to primary health care and eHealth tools.¹⁵ The Recovery and Resilience Facility can also be complemented by the technical support provided through the European Commission's Technical Support Instrument (TSI). The TSI is a tool designed to assist Member States in tailoring and implementing national

reforms upon request, including those identified in the European Semester, and is available to help Member States prepare, implement and revise the National Recovery and Resilience Plans required to dispense the Recovery and Resilience Facility funds.¹⁷ Several Member States have opted to include health system reforms among their priorities and implemented different approaches to tackle health system gaps in their national plans (see Box 3).

Ministers from the Member States met at the EPSCO (Employment, Social Policy, Health and Consumer Affairs) Council on 7 December 2021 to discuss and approve the Council conclusions on “Strengthening the European Health Union”,¹⁸ which feature four main priorities: developing and deploying innovative solutions for resilient health systems, enhancing the accessibility and availability of medicinal products and medical devices, beating cancer and strengthening the role of the EU in Global Health. The document reflects the lessons learnt from the pandemic and underscores that strengthening resilience and building a European Health Union have become a priority for the EU and its Member States.

Shaping EU health policy in the future

Limited competence in the area of health has resulted in EU health policy having been shaped primarily by other fields for which the EU has a legal mandate over many years, such as agriculture and the internal market. This is also reflected in the variety of EU tools, which are scattered across different policy areas and are oftentimes difficult for Member States to navigate, but which are nonetheless relevant for strengthening health systems (also see the article by Mauer et al. in this issue on EU health system support tools). This has resulted in fragmentation and has reduced the added value which the EU could have for Member States in the area of health. The pandemic has highlighted the need to enhance the EU dimension in health security, while also reminding us of the global nature of health and the need to strengthen other health system pillars to ensure their sustainability and resilience to future shocks. This prompts further

discussion into how European leaders may best strengthen solidarity and shape EU action on health in the upcoming years.

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The European Observatory on Health Systems and Policies and the General Directorate for HealthCare Services of the French Ministry of Health (DGOS) have worked together to produce this special Eurohealth on the French Presidency of the European Union (FPEU).

The resilience of health systems and cooperation between Member States have become particularly important during the COVID-19 pandemic. On the occasion of the FPEU 2022, we have therefore produced this special issue of Eurohealth to better understand how health systems have responded to the health crisis and to draw lessons for improving resilience of health systems.

The European Observatory on Health Systems and Policies is a partnership that supports and promotes evidence-based health policymaking through comprehensive and rigorous analysis of health care systems in Europe. The Observatory has an extensive publication programme designed to share that evidence in print, in 'person' and online, acting as a knowledge broker and bridging the gap between academia and practice.

<http://healthobservatory.eu/>

The DGOS is in charge of the development and implementation of public policies capable of responding to the challenges facing the health system in the coming years. Specifically, this means meeting the growing care needs of the population while ensuring the sustainability of solidarity financing, and implementing the national health strategy launched by the government. It undertakes this role by implementing innovative intervention methods including strategic management, a project-based approach, providing support, and conducting evaluation.

<https://solidarites-sante.gouv.fr>